3 50

My dear S Daniel:- In sending you this curious century old book, I am sure you will be interested to know that I found it rummaging in the attic of my Grandfather's house, just before it was torn down in 1890. It was hidden behind a big beam, where it had probably rested nearly the whole time.

My family on both sides went down to the Sea in Ships — In October 1783 Capt. Joseph Baker, my grandfather's father, sailed from his landing in Arrington River on the Penobscot River, in his own vessel laden with food stuffs for the colonists in Boston, his wife and a woman companion accompanied him.

At Castine, where the British had a fort his vessel was seized and contents confiscated. The women set on shore in the unsettled wilderness of Maine, where they travelled for eight miles before finding a white settlement (the Indians were friendly)

Here my Grandfather was born in the following March. Capt. Baker was made prisoner and kept there clearing ditches until the war was over. The following Spring, with no knowledge of the fate of his wife or their unborn child.

I think my great-grandfather's character is shown by his replies to the Commanding officer when he set him to do the most degrading work of a military camp. "Can you clean the ditches" "I can do anything I am obliged to do" "Will you do it well" "It has been the rule of my life to do, as well as I can, whatever I do"

August 18th 1915 Mercy N. Baker, M.D.

THE

WORKS

OF

ARISTOTLE,

THE

FAMOUS PHILOSOPHER

IN FOUR PARTS.

CONTAINING

I. His COMPLETE MASTER-PIECE; displaying the secrets of Nature in the Generation of man. To which is added, The FAMILY PHYSICIAN; being approved remedies for the several Distempers incident to the human Body

II. His EXPERIENCED MIDWIFE; absolutely necessary for Surgeons, Midwives, Nurses and Child bearing Women

III. His BOOK OF PROBLEMS, containing various Questions and Answers, relative to the State of Man's Body.

IV. His LAST LEGACY; unfolding the Secrets of Nature respecting the Generation of Man.

A NEW EDITION.

NEW ENGLAND:

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TO THE

READER.

TO say that Aristotle, the learned author of the following sheets, was reputed to be the most learned philosopher in the World, is no more than what every intelligent person already knows: nor can any think otherwise, who will give themselves time to consider that he was the schollar of Plato (the wisest philosopher of his time) and under whom Aristotle profited so much, that he was chosen by king Philip of Macedon as the most worthy and proper person in his dominions to be the tutor of his son Alexander, by whose wise precepts and instructions Alexander became master of so great wisdom, judgment, prowess, and magnanimity, that he justly obtained the title of the Great. Alexander himself was so sensible of the advantage he received from the instructions of so great a Stagirite (for so Aristotle was called from the country of Stagira, where he was born) that he often declared he was more beholden to his tutor Aristotle for the cultivation of his mind, than to his father Philip for the kingdom of Macedon.

Though Aristotle applied himself to the investigation of the secrets of nature, yet he was pleased to bring into a fuller and more true light those secrets with respect to the generation of man. This he styled his Master Piece; *and in this he has made so thorough a search, that he has as it were turned nature inside out.*

The divine records assure us, that the secrets of nature have been the study of diverse illustrious persons, equally renowned for wisdom and goodness; the first of whom, Job has made it sufficiently evident by that excellent philosophical account he gives of the generation of man, in the tenth chapter of the book which bears his name, where he says, "Thine hands have made me, and fashioned me together round about: Thou hast poured me out as milk and curdled me like cheese: Thou hast clothed me with skin and flesh, and hast fenced me with bones and sinews"——David, one of the greatest kings of Israel, whose piety was superior to his power, being peculiarly styled a man after God's own heart, says in his divine soliloquies to his Creator, "Thou hast covered me in my mother's womb; I will praise thee, for I am fearfully and wonderfully made: Marvellous are thy works, and that my soul knoweth right well. My substance was not hidden from thee when I was in secret, and curiously wrought in the lowest parts of the earth: Thine eye did see my substance, yet being unperfect; and in thy book, all my members

were written, which in continuance were fashioned, when as yet there was none of them.

Let the words of holy Job and those of David be put together, and I will not scruple to affirm, that they make the most accurate system of philosophy respecting the generation of man that has ever yet been penned; therefore why should not the mysteries of nature be inquired into without censure, since, from this inquiry, so much praise resounds to the God of nature! For, the more we know of his works, the more our hearts will be inclined to praise him, as we see in the instance of David above mentioned.

That the knowledge of the secrets of nature is too often abused by many persons, I readily grant; and think it very unfortunate that there should be a generation of such profligate persons in the world; but at the same time do aver that this is no objection to the work.

Having said thus much of the wonderful works of nature in the generation of man, I shall next proceed to give the reader the best translation possible of that excellent treatise of the renowned Aristotle, which he was pleased to style his MASTER PIECE.

I cannot help observing, that having met with a collection of approved receipts by the great HYPPOCRATES, *and thinking they would be very acceptable to my readers, I have added the same by way of supplement, at the end of the Master piece.*

ARISTOTLE's MASTER PIECE.

PART I.

THE SECRETS OF NATURE DISPLAYED.

INTRODUCTION.

IT is ſtrange to ſee how things are ſlighted only becauſe they are common, though in themſelves worthy the moſt ſerious conſideration, this is the very caſe of the ſubject I am now treating of. What is more common than the begetting of children? And what is more wonderful than the plaſtic power of natue, by which children are formed? For tho' there is radicated in the very nature of all creatures, a propenſion which leads them to produce the image of themſelves, yet how theſe images are produced after thoſe propenſions are ſatisfied, is only known to thoſe who trace the ſecret meanders of nature in their private chambers, to thoſe dark receſſes of the womb, where this embryo receives formation. The original of which proceeds from the divine command, *increaſe and multiply*. The natural inclination and propenſity of both ſexes to each other, the plaſtic power of nature, is only the energy of the firſt bleſſing, which to this day upholds the ſpecies of mankind in the world.

Now ſince philoſophy informs us, that *Noſce teipſum*, is one of the firſt leſſons a man ought to learn, it cannot ſurely be accounted an uſeleſs piece of knowledge for a man to be aquainted with the cauſe of his own being, or by what ſecret power of nature it was, that coagulated milk (as a divine author calls it) came to be ſubſtantiated into a human body. The explanation of this myſtery, and the unfolding the plaſtic power of nature, in the ſecret workings of generation and the formation of the ſeed in the womb is the ſubject of the following treatiſe; a ſubject ſo neceſſary to be known to the female ſex that many for want of this knowledge have periſhed with the fruit of their womb alſo; who had they but underſtood the ſecrets of generation, which are diſplayed in this treatieſe might have been ſtill living. For the ſake of ſuch, I have compiled this work, which I have divided into two parts in the following manner.

1ſt. I will ſhew that nature need not be aſhamed of her work; and give a particular deſcription of the parts or organs of generation in man, and afterwards in woman; and then to ſhew the uſe of theſe parts in the act of coition; and how poſitively nature has adapted them to the end for which ſhe ordained them.

2dly, I will point out the prohibition or reſtriction, that the Creator of all things and Lord of nature has put upon man by the inſtitution of marriage, with the advantage it brings to mankind.

3dly, I shall shew when either sex may enter into a married state, and be fit to answer the end of the creation, &c.

4thly, I shall discourse of virginity, and therein shew what it is, how it is known, by what means it may be lost, and how a person may know that it is so.

In the second part, which chiefly relates to married women, and the preservation of the fruit of the womb, for the propagation of mankind to the world, I shall shew,

1st, what conception is: what is prerequisite thereunto: how a woman may know when she hath conceived, and whether a boy or a girl.

2dly, Shew how a woman that has conceived ought to order herself,

3dly, Shew what a woman ought to do that is near the time of her delivery, and how she ought to be assisted,

4thly, I shall shew what are the obstructions of conception, and therein discourse largely about barrenness, and shew what are the causes, and cure thereof, both in men and women,

5thly, Direct midwives how they could assist women in the time of their lying in, bringing several other material matters proper to be spoken of under each of these several heads: which will sufficiently render this book what Aristotle designed it, his COMPLETE MASTER PIECE.

CHAP. I.

Particular Description of the Parts and Instruments of Generation, both in Men, and Women.

SECTION I.

Of the instruments of generation in men, with a particular description thereof.

THOUGH The Instruments or parts of generation in all creatures, with respect to their outward form, are not perhaps the most comely; yet in compensation of that, nature has put upon them a more abundant and far greater honor than on other parts, in ordaining them to be the means by which every species of being is continued from one generation to another. And therefore though a man or woman were through the bounty of nature, endowed with angelic countenances, and the most exact symmetry and proportion of parts that concurred together to the making up of the most perfect beauty, yet, if they were defective in the instruments of generation, they would not for all their beauty, be acceptable to either of the other sex; because they would be thereby rendered incapable of satisfying the natual propensions which every one finds in himself. And therefore, since it is our duty to be acquainted with ourselves, and to search out the wonders of God in nature, I need not make any apology for anatomizing the secret parts of generation.

The organ of generation in man, nature has placed obvious to the sight, and is called the yard; and because hanging without the belly, is called the penis, *a pendendo*. It is in form long, round, and on the upper side flatish, and consists of skin, tendons, veins, arteries, and sinews, being seated under the Ossa Pupis, and ordained by nature for a two fold work, viz. for

the evacuating of urine, and conveying the ſeed into the matrix. The urine which it evacuates is brought to it through the neck of the Veſica Urinariæ, and the ſeed which it conveys into the matrix, is brought into it from the Veſiculae Seminales. But to be more particular.

Beſides the common parts, as the cuticle, the skin and the Membrana Carnoſa, it has ſeveral internal parts proper to it, of which number there are ſeven, viz.

The two nervous bodies; the Steptun; the Urethra; the Glands; the Muſcles; and the veſſels: of each of theſe diſtinctly, in the order I have placed them; and, firſt, of

The two nervous bodies. Theſe are called ſo from their being ſurrounded with a thick, white, nervous membrane, though their inward ſubſtance is ſpongy, as conſiſting principally of veins, arteries, and nervous fibres, interwoven like a net. And nature has ſo ordered it, that when the nerves are filled with animal ſpirits, and the arteries with hot and ſpiritous blood, then the yard is diſtended, and becomes erect; when the flux of the ſpirit ceaſes, when the blood and the remaining ſpirits are abſorbed, or ſucked up by the veins, and ſo the penis becomes limber and flaggy.

2 The ſecond internal part is the Steptun Lucidum, and this is in Subſtance white and nervous, or ſinewy; and its office is to uphold the two lateral or ſide ligaments and the Urethra.

3 The third is the Urethra, which is only the channel by which both ſeed and urine are conveyed out; it is in ſubſtance ſoft and looſe, thick and ſinewy, like that of the ſide ligaments. It begins at the neck of the bladder, but ſprings not from thence, only is joined to it and ſo proceeds to the glands It has three holes at the beginning, the largeſt of which is in the midſt, which receives the urine into it. The other two are ſmaller receiving the ſeed into each ſeminal veſſel.

4. The fourth is the Glands, which is at the end of the penis, covered with a very thin membrane, by reaſon of a Praeputium or Foreskin, which in ſome covers the top of the yard quite cloſe, in others not; and by its moving up and down in the act of copulation brings pleaſure both to man and woman. The extreme part of this cover, which I call Praeputium, and which is ſo called a *Praeputando*, from cutting off, as the Jews were commanded to cut it off on the eighth day. The ligaments by which it is faſtened to the glands is called Fraenum, or the bridle.

5. The fifth thing is the Muſcles, and theſe are four in number, two being placed on each ſide These muſcles (which are inſtruments of voluntary motion, and without which no part of the body can move itſelf) conſiſts of fibrous fleſh to make up their body; of nerves for the ſenſe; of veins for their vital heat; and of a membrane or skin to knit them together, and to diſtinguiſh one muſcle from the other, and all of them from the fleſh. I have already ſaid there are two of them on each ſide; and I now will add, that one on each ſide is ſhorter and thicker, and that their uſe is to erect the yard, from whence they have ob

tained the name of erectors. And having told you that two of them are thicker and shorter than the other. I need not tell you that the other two are longer and thiner; only I take notice, that the office of the two last is to dilate, if you will, open the lower part of the Urethra, both for making water and voiding the seed, and therefore are called Accelerators

6 The sixth and last things are the vessels, which consist of Veins, Nerves, and Arteries: of which some pass by the skin and are visible to the eye, and others pass more inwardly. For indeed the Arteries are dispersed through the body of the yard much more than the veins, and the dispersion is contrarywise, the right artery being dispersed to the left side and the left to the right; as for the two nerves, the greater is bestowed upon the muscles and the body of the yard, and the less upon the skin.

What I have hitherto said relates to the yard, properly so called; but, because there are some appendages belonging therto, which, when wanted render the yard of no use in the act of generation, it will also be necessary before I conclude the section, to say something of them, I mean the stones, or testicles so called because they testify the person to be a man; their number and place is obvious; and as to their use, in them the blood brought thither by the spermatic arteries is elaborated into seed. They have coats or coverings of two sorts. proper and common; the common are two, and invest both the testes: the outermost of the common coats, consist of the cuticula, or true skin, called Scrotum, hanging out of the abdomen like a purse. Membrana Carnosa is in the innermost. The proper coats are also two: the outer called Elithoridis or Vaginalis, the inner Albugiena, into the outer are inserted the Cremasters: to the upper part of the testus are fixed the Epidermis, or Parastatae, from whence arise the Vasa Deferentia Ejaculatoria, which when they approach near the neck of the bladder, deposit the seed into the Siculae Seminales, which are each or two or three of them, like a bunch of grapes, and emit the seed into the urethra in the act of copulation. Near those are the Parastatae, which are about the bigness of a walnut, and join to the neck of the bladder. These afford an oily, slippery and salt humor, to besmear the Urethra, and thereby defend it from the acrimony of the seed and urine. Beside these vessels, by which the blood is conveyed to the testes or of which the seed is made, and, the arteriae spermaticae, there are also two; and, so likewise are the veins, which carry out the remaining blood, which are called venae spermaticae.

And thus those nobler parts we see
For such the parts of generation be:
And they who carefully survey will find
Each part is fitted for the use design'd:
The purest blood we find if well we heed,
Is in the testicles turn'd into seed:
Which by most proper channels is transmitted.
Into the place by nature for it fitted:
With highest sense of pleasure to excite
In amorous combatants the more delight;

For in this work nature doth design
Profit and pleasure in one act to join.

SECTION II.

Of the secret parts in Women.

WOMAN, next to man, the noblest piece of this creation, is bone of his bone, and flesh of his flesh, a sort of second self; and, in a married state are accounted but one, as the poet says,

Man and wife are but one right
Canonical hermaphrodite

It is therefore the secret parts of that curious piece of nature that we are to lye open, which we will do with as much modesty as will consist with speaking intelligible.

The external parts commonly called pudenda (from the shame facedness that is in woman to have them seen) are the lips of the great orifice which are visible to the eye; and in those that are grown, are covered with hair, and have pretty store of spongy fat; their use being to keep the internal parts from all annoyance by outward accidents.

Within these are the Nymphae, or wings, which present themselves to the eye when the lips are severed, and consist of soft and spongy flesh, and the doubling of the skin placed at the sides of the neck; they compass the clitoris, and both in form and color resemble the comb of a cock, looking fresh and red, and in the act of coition receive the penis or yard betwixt them; besides which they give passage both to the birth and urine. The use of the wings and knobs like myrtle berries, shutting the orifice and neck of the bladder, and by the swelling up, cause titilation and delight in those parts, and also to obstruct the voluntary passage of the urine.

The next thing is the clitoris, which is a sinewy and hard part of the womb, replete with spongy and black matter within, in the same manner as the side ligaments of the yard suffers erection and falling in the same manner, and both stirs up lust and gives delight in copulation, for without this, the fair sex neither desire nuptial embraces nor have pleasure in them. nor conceive by them; and according to the greatness or smallness of this part, they are more or less fond of men's embraces; so that it may properly be styled the seat of lust.

Blowing the coals of those amorous fires,
Which youth and beauty to be quench'd requires.

And it may well be stiled so, for it is like a yard in situation, substance, composition, and erection, growing sometimes out of the body two inches, but that happens not but upon some extraordinary accident. It consists as I have said, of two spongy and skinny bodies which being a distinct original from the Os Pubis, the head of it being covered with a tender skin, having a hole like the yard of a man, but not through, in which, and the bigness of it only differs.

The next thing is the passage of the urine, which is under the clitoris, and above the neck of the womb, so that the urine of a women comes not through the neck of the womb, neither is the passage common as in men, but particular, and by itself. This

paſſage opens itſelf into the fiſſure to evacuate the urine; for the ſecuring of which from cold, or any other inconveniency, there is one of the four caruncles, or fleſhy knobs placed before it, which ſhuts up the paſſage.

For theſe knobs, which are in number four, and in reſemblance like myrtle berries are placed behind the wings before ſpoken of, quadrangularly, one againſt the other. Theſe are round in virgins, but hang flagging when virginity is loſt — 'Tis the uppermoſt of theſe that nature has placed for the ſecuring the urinary paſſage from cold, and which is therefore largeſt and forked for that end.

The lips of the womb that next appear; cover the neck thereof but being ſeparated diſcloſe it; and then two things are to be obſerved, and, theſe are the neck itſelf, and the hymen, more properly called the Clauſtrum Virginale, which I ſhall treat more at large when I come to ſhow what virginity is. The neck of the womb, I call the channel, is between the fore mentioned knobs and the inner bone of the womb, which receives the man's yard like a ſheath: and that it may be dilated with the more eaſe and pleaſure in the act of coition, it is ſinewy and a little ſpongy; and there being in this concavity divers folds or orbicular plates made by tunicles, which are wrinkled, it forms an expanded roſe that may be ſeen in virgins: but in thoſe that have uſed copulation, it comes by degrees to be extinguiſhed; ſo that the inner ſide of the neck of the womb appears ſmooth, and in old women it becomes more hard and griſly. But though this channel be ſinking down, wreathed, and crooked, yet it is otherwiſe in the time of copulation; as alſo when women are under the monthly purgation, or in labor, being then very much extended, which is a great cauſe of their pains.

The Clauſtrum Virginale, commonly called the Hymen is that which cloſes the neck of the womb; for between the duplicity of the two tunicles which conſtitute the neck of the womb, there are many veins and arteries running along, that ariſe from the veſſels of both ſides of the thighs, and ſo paſs into the neck of the womb, being very large; and the reaſon thereof is becauſe the neck of the womb requires to be filled with abundance of ſpirits to be dilated thereby, that it may the better take hold of the penis, ſuch emotions requiring great heat, which being more intent by the act of friction, conſumes a great deal of moiſture, in the ſupplying of which large veſſels are very neceſſary: hence it is that the neck of the womb in women of reaſonable ſtature, is eight inches in length. But there is alſo another cauſe of the largeneſs of theſe veſſels, becauſe their monthly purgations make their way through them; and for this reaſon, women though with child, often continue them: for though the womb be ſhut up, yet the paſſage in the neck of the womb, through which theſe veſſels paſs, is open. And therefore, as ſoon as you penetrate the pudendum, there may be ſeen two little pits or holes, and in which are continued an humor, which, by being preſſed out in the time of coition, does greatly delight the fair ſex.

I shall in the next place, proceed to a description of the womb which is the field of generation, without which nothing can be done. The parts we have been speaking of being ordained by nature to convey the seed to the womb, which being impregnated therewith by virtue of the plastic power of nature, produces its own likeness.

The womb is situated in the lower parts of the hypogastrion, being joined to its neck, and is placed between the bladder and the strait gut, so that it is kept from swaying or rolling: yet hath its liberty to stretch and dilate itself and also to conduct itself according as nature in that case disposes it, it is of a round figure somewhat like a gourd; lessening and growing more acute towards one end, being knit together by its proper ligaments, and its neck joined by its own substance, and certain membranes that fasten it to the Os Sacrum and the share bone It is very different, with respect to its largeness in women especially between such as have had children, and those that have had none. It is so thick in substance that it exceeds a thumbs breadth; and after conception augments to a greater proportion, and to strengthen it yet more, it is interwoven with fibres overthwart, both strait and winding; and its proper vessels are veins, arteries and nerves; amongst which there are two little veins which pass from the spermatic vessels to the bottom of the womb, and two bigger from the hypogastricks, touching the bottom and neck, the mouth of these veins piercing so far as the inward cavity.

The womb, besides what I have already mentioned, hath two arteries on both sides the spermatic vessels and the hypogasticks, which still accompany the veins, with sundry little nerves knit and interwoven in the form of a net, which are also extended throughout, even from the bottom to the pudenda themselves, being so placed chiefly for the sense of pleasure, sympathetically moving from the head and womb.

Here the reader ought to observe, that two ligaments hanging on either side of the womb from the share bone, piercing through the Peritonaeum and joining to the bone itself causes the womb to be moveable, which upon divers occasions either falls low or rises; the neck of the womb is of the most exquisite sense, so that if it be at any time disordered, either with a schirrosity, too much hot moisture or relaxation, the womb is subject to barrenness In those that are near their delivery, there usually stays a most glutinous matter in the entrance, to facilitate the birth; for at that time the mouth of the womb is open to a wideness in proportion to the bigness of the child

Under the parts belonging to generation in women, are also comprehended the preparatory or spermatic vessels; the preparatory vessels differ not in number from those in man, for they are likewise four, two vessels and two arteries; their rise and original is the same as in man, on the side of them are two arteries which grow from them, differing only in their size and manner of insertion, the right vein issuing from the trunk of the hollow vein, and the left from the emulgent vein; and on the side of them are two arteries which grow from the arcta. These preparatory vessels are shorter in women than in men,

becauſe they have a ſhorter paſſage, the ſtones of a woman lying within the belly, but thoſe of a man without: but to make amends for their ſhortneſs, they have far more writhing to and fro, in and out, than they have in men; that ſo the ſubſtance they carry may be the better prepared, neither are they united as they are in men, before they come to the ſtones, but are divided into two branches, whereof the greater only paſſeth to the ſtones, but the leſſer to the ſecundated egg, and this is properly called conception. And then ſecondly, to cheriſh and nouriſh it, till nature has framed the child, and brought it to perfection. Thirdly, it ſtrongly operates in ſending forth the birth, when its appointed time is accompliſhed, there dilating itſelf in an extraordinary manner; and ſo aptly removed from the ſenſes, that no injury accrues to it from thence, retaining in itſelf a ſtrength and power to operate and caſt forth the birth.

The uſe of the preparatory veſſels is to convey the blood to the teſticles, of which a part is ſpent in the nouriſhment of them, and the production of theſe little bladders in all things reſembling eggs, through which the vaſa Praeparantia run, and are obliterated in them. This conveyance of blood is by the arteries, but as for the veins, their office is to bring back what blood remains from the fore mentioned uſe.

The veſſels of this kind are much ſhorter in women than men, by reaſon of their nearneſs to the teſticles; and yet that defect is more than made good by the many intricate windings to which they are ſubject; for in the middle way they divide themſelves into two branches of different magnitude; for, one of them being bigger than the other, paſſes to the teſticles.

The teſticles in women are very uſeful; for where they are defective, generation work is quite ſpoiled; for though thoſe little bladders which are on their outward ſuperfices contain nothing of ſeed, as the followers of Galen, &c erroneouſly imagine, yet they contain ſeveral eggs (about the number of 20 in each teſticle) one of which being impregnated by the moſt ſpirituous part of man's ſeed to the act of coition, deſcends through the oviducts into the womb, where it is cheriſhed till it becomes a live child. The figure of theſe Oveae or eggs, is not altogether round, but a little flat and depreſſed on the ſides, and in their lower part oval, but where the blood veſſels enter them, that is, in the upper part, they are more plain, having but one membrane about them that the heat may have more eaſy acceſs to the womb, both to the nouriſhment of itſelf and the infant therein. Let me further add, theſe ſpermatic veins receive the arteries as they paſs by the ſide of the womb, and thereby make a mixture of the vital and natural blood, that their works be more perfect. The deferentia, or carrying veſſels ſpring from the lower part of the ſtones, and are in color white, ſubſtance ſinewy, and paſs not through the womb ſtraight, but wreathed; they proceed from the womb in two parts, reſembling horns, whence they are called the horns of the womb.

The ſtones of women are another part belonging to the inſtruments of generation; for ſuch things they alſo have as well as

men but they are alſo differently placed: neither is their bigneſs temperament, ſubſtance, form, or covering the ſame. As to their place it is the hollowneſs of the abdomen, reſting upon the muſcles of the loins, and ſo not pendulous, as in man. And that they are ſo placed is, that by contracting the heat, they may be the more fruitful, their office being to contain the ovum, or egg, which being impregnated by the ſeed of the man, is that from which the embryo is engendered. The ſtones differ alſo from men's in their form; for though they are ſmooth in men, they are uneven in women; being alſo depreſſed or flattiſh in them, though in men their form is round and oval. They have alſo in women but one skin, whereas in men they have four. Nature having wiſely contrived to fortify theſe moſt againſt the injuries of the air, that are moſt expoſed to it; the ſtones of women being within, but thoſe of men without the belly. They differ alſo in their ſubſtance, being much more ſoft than thoſe of men, and not ſo well compacted: their bigneſs and temperature differ, in that they are leſs and colder than thoſe in men. Some indeed will have their uſe to be the ſame as in men. but that is for want of judgment; for Ariſtotle and Scotus both affirm, that the women have no ſeed, and that their ſtones differ alſo in their uſe from thoſe of men; their uſe being as I have already ſaid, to contain that egg which is to be impregnated by the ſeed of a man.

It now remains, that I ſay ſomething of the ejaculatory veſſels, which have two obſcure paſſages, one on either ſide, which in ſubſtance differ nothing from the ſpermatic veins. They riſe in one part from the bottom of the womb, but not reaching from the other extremity, either to the ſtones, or any other part, are ſhut up and incapable, adhering to the womb, as the colon doth to the blind gut, and winding half way about; though the ſtones are remote from them, and touch them not, yet they are tied to them by certain membranes reſembling the wings of a bat. through which certain veins and arteries, paſſing from the end of the ſtones, may be ſaid here to have their paſſages, proceeding from the corners of the womb to the teſticles, and are accounted the proper ligaments by which the teſticles and the womb are united and ſtrongly knit together.

Thus the women's ſecrets I have ſurvey'd,
And let them ſee how curiouſly they're made,
And that though they of different ſexes be,
Yet on the whole they are the ſame as we,
For thoſe that have the ſtricteſt ſearchers been,
Find women are but men turn'd outſide in:
And men if they but caſt their eyes about,
May find they're women with their inſide out.

SECTION. III.

Of the uſe and Action of the ſeveral Parts in Women appropriate to Generation.

I SHALL next take a ſurvey of the parts of generation both in men and women, and ſhew the uſe and action of theſe parts in the work of generation, which will excellently inform us that nature has made nothing in vain.

The external parts in a woman's privities, or that which is moſt obvious to the eye at firſt, commonly called Pudendum, are deſigned by nature to cover the great orifice, nature intending that orifice to receive the penis or yard in the act of coition and alſo to give paſſage to the urine, and, at the time of birth to the child. The uſe of the wings or knobs, like myrtle berries, are for the ſecurity of the internal part by ſhutting up the orifice, and neck of the bladder, alſo for delight and pleaſure; for by their ſwelling up, they cauſe titilation and delight in thoſe parts, being preſſed by the man's yard. Their uſe is likewiſe to obſtruct the involuntary paſſage of the urine.

The uſe and action of the clitoris in women is like that of the penis or yard in men, that is erecting its extreme end, being like that of the glands in the men, the ſeat of the greateſt pleaſure in the act of copulation. ſo, is this of the clitoris in women, and therefore called the ſweetneſs of love, and the fury of venery.

The action and uſe of the neck of the womb, is the ſame with that of the Penis, that is, erection which is occaſioned ſundry ways; for Firſt, in copulation it is erected and made ſtraight for the paſſage of the Penis to the womb. Secondly, while the paſſage is replete with the ſpirits and vital blood, it becomes more ſtraight for embracing the penis. And for the neceſſity of erection there is a two fold reaſon: one is, that if the neck of the womb was not erected, the yard could have no convenient paſſage to the womb. The other is, that it hinders any hurt or damage that might enſue through the violent concuſſion of the yard during the time of copulation.

Then as the veſſels that paſs through the neck of the womb, their office is to repleniſh it with blood and ſpirits, that ſo as the moiſture conſumes through the heat contracted in copulation, it may ſtill by theſe veſſels be renewed But their chief buſineſs is to convey nutriment to the womb.

Thus Nature nothing does in vain produce,
But fits each part for what's its proper uſe:
And though of different ſexes form'd we be,
Yet betwixt theſe there is that unity,
That we in nothing can a greater find,
Unleſs the ſoul that's to the body join'd:
And ſure in this Dame Nature's in the right,
The ſtricteſt union yields the moſt delight.

CHAP. II

Of the reſtriction laid upon Men in the uſe of Carnal Copulation, by the inſtitution of Marriage, with the advantage that it brings to mankind and the proper time for it.

THOUGH the great Architect of the world has been pleaſed to frame us of different ſexes, and, for the propagation and continuation of mankind, has indulged us the mutual embraces of each other, the deſire whereof, by a powerful and ſecret inſtinct, is become natural to us, yet he would leave them to the law of the Creator, who has ordained that every man ſhall have his own wife; and, though, ſince man, by ſinning againſt his Creator, hath fallen from his primitive purity, and has multiplied wives and concubines, by which the firſt inſtitu-

tion is violated, and the groſſeſt affront given to the Divine Law-giver; for the holy Jeſus hath told us, That in the beginning marriage was of one man to one women: ſo that as theſe conjugal delights cannot be enjoyed but in a married ſtate, ſo neither, in that ſtate, can they lawfully be participated of with more than one wife And it is the breaking of this order that has filled the world with confuſion and debauchery; has brough diſeaſes on the body, conſumption on the eſtates and eternal ruin to the ſoul, if not repented of. Let all thoſe, therefore, of either ſex, that have a deſire to enjoy the delights of mutual embraces, take care that they do it in a married ſtate, with their own wives or husbands, or elſe it will become a curſe to them, inſtead of a bleſſing: And, to that end let them conſider what is due to tranſgreſſors of his law, who hath ſaid, *Thou ſhalt not commit Adultery* Whatever is ſpoken of the veneral pleaſure, is ſpoken to thoſe who have or may have, a right thereunto, by being in a married ſtate. For,

Who to forbidden pleaſures are inclin'd,
Will find at laſt they leave a ſting behind.

SECTION II.

Of the happineſs of the Married State.

Matrimony, in the preſent age, is looked upon as a moſt inſupportable yoke: Wives and husbands are accounted the greateſt clogs and burthens to thoſe who give up the reins to their unbridled appetites. Notwithſtanding the preſent mode of thinking is againſt me, I doubt not of making it appear, that a married ſtate is the moſt happy condition, (where perſons are equally yoked) that is to be enjoyed on this ſide Heaven.

The author and inſtitutor of marriage, and who firſt brought man and woman together, was no other than he that made them, even the Great Lord of the univerſe, whoſe wiſdom being infinite, could not but know what condition was good for us; and his goodneſs being equal to his wiſdom, ſufficiently ſhews the end of this inſtitution was the happineſs of the creature he had made; and indeed man could not be happy without it; for he ſaw that it was not good that man ſhould be alone, and therefore made a woman to complete his happineſs, which was not perfect whilſt he wanted ſuch a help mate for him

The time of the inſtitution is alſo very remarkable: for it was whilſt Adam and his new made bride were clothed with all that virgin purity and innocence with which they were created, before they had entertained the leaſt converſe with the temper, or had given way to one diſordered thought; and yet could curiouſly ſurvey the ſeveral incomparable beauties and perfections of each other without ſin, and knew not what it was to luſt. It was at this time that the Creator united Adam in the holy bands of wedlock.

'Twas in paradiſe where the firſt match was made; and which could ſcarcely have been paradiſe without it; for paradiſe is known to be a place of pleaſure, wherein they were ſurrounded with the quinteſſence of all delights; where there was nothing wanting that might pleaſe the eye, charm the ear, or gratify the taſte; and yet Adam was not happy with theſe pleaſing ſweets

'till he enjoyed his Eve; so that it was a married state which completed his happiness, and which was a paradise of pleasure itself.

What an addition to happiness a good wife makes! such an one is the best companion in prosperity, and in adversity the surest friend; the greatest assistance in business, the only lawful and comfortable means by which he can have issue, and the great remedy against incontinence; and if we believe king Solomon, The greatest honor unto him that has her. For he tells us, She is a *crown to her husband* Surely these are not small advantages!

If married persons would be careful to do their respective duties, there would be but little complaining; nor would any condition in life be so agreeable as the married state. How much more satisfaction a man receives in the embraces of a loving wife, than in the wanton dalliances of a deceitful harlot.

Thus does this section unto all relate
The pleasures which attend the married state:
And shews it does with innocence consist;
And that so many have those pleasures miss'd,
'Tis their own fault, they will no wiser be,
As in this mirror they may plainly see.

SECTION III.

At what age young Men and Virgins are capable of carnal copulation; and why they so much desire it.

I shall in the present section, make it my business to shew at what age young men and virgins are capable of the marriage bed, which because so many desire before they attain to it, it will likewise be necessary to shew the cause of their impetuous desires.

The inclination of virgins to marriage is to be known by many symptoms; for when they arrive at ripe age, which is about fourteen or fifteen, their natural purgations begin to flow; and then the blood which no longer serves for the increase of their bodies, does by its abounding, stir up their minds to venerate; to which also external causes may incite them. For their spirits are brisk and enflamed when they arrive at this age, and their bodies are often more heated by their eating sharp and salt things; and by spices, by which their desire of venerable embraces becomes very great, and, at some critical junctures almost insupportable. The use of those so much desired enjoyments being denied to virgins, is often followed by very dangerous, and sometimes dismal consequences precipitating them into those follies that may bring an indelible stain on their families, or bring on themselves the Green Sickness, or other diseases But when they are married and those desires satisfied by their husbands, those distempers vanish and their beauty returns more gay and lively than before. And this strong inclination of theirs may be known by their eager gazing at men, and affecting their company, which sufficiently demonstrates that nature excites them to desire coition. Nor is this the case with young virgins only, but the same may be observed in young

widows, who cannot be ſatisfied without that due benevolence which they were wont to receive from their husbands.

At fourteen years of age commonly, the menſes begin to flow in virgins; at which time they are capable of conceiving and therefore fit for marriage: though it would be much better both for themſelves and their children if they would not marry till eighteen or twenty; if they are healthy, of ſtrong body, and uſe themſelves to temperance they may continue bearing till upwards of 50, though generally leave off between 40 and 50: for the menſes flow longer in ſome than in others: But when they ceaſe, they ceaſe bearing, and therefore Sarah bearing Iſaac after it had ceaſed to be with her according to the cuſtom of women, may well be termed miraculous.

As for male youth, when they arrive at 16 or between that and ſeventeen; having much vital ſtrength, they may be capable of getting children; which ability, by the force and heat of procreating matter, conſtantly increaſes till 45, 56, 65, and then begins to flag, the ſeed by degrees becoming unfruitful, the nature of ſpirits being extinguiſhed, and the heat dried up Thus it is with them for the moſt part, but many times it falls out otherwiſe in particular inſtances as once in Sweden, a man was married at 100 years old to a bride of 30, and had many children by her; but he was a man of ſo hale a conſtitution, and carried his age ſo well, that ſtrangers would not have gueſſed him at above 60 And in Campania, where the air is clear and temperate, it is uſual for men of 80 years old to marry young virgins, and have children by them; which ſhews that age in man, hinders not procreation, unleſs they be exhauſted in their youth, and their yards ſhivered up.

If any ask, why a woman is ſooner barren than a man? let ſuch know that the natural heat, which is the cauſe of generation is more predominant in men than women: for the monthly purgations of women ſhew them to be more moiſt than men, and ſo does alſo the ſoftneſs of their bodies. And the man exceeding her in native heat, concocts the humors into proper aliment, by the benefit whereof they are elaborated into ſeed; but women though of a finer make, yet not being ſo ſtrong as men, their faculties are thereby hindered in their operation.

Thus nature to her children is ſo kind,
That early they thoſe inclinations find,
Which prompts them on to propagate their kind.
Hence 'tis a virgin her deſires can't ſmother,
But reſtleſs is 'till ſhe be made a mother.

CHAP. III.

Of Virginity, what it is, how it may be known, by what means it may be loſt, and how a perſon may know that it is ſo.

SECTION I.

Of virginity and wherein it conſiſts.

HAVING treated of the deſire young men and virgins have to mutual embraces, and at what age they are fit for them; I have alſo ſhewn that thoſe pleaſures are only lawful to be enjoyed in a married ſtate; and have alſo acquainted the reader with the advantage of ſuch a condition. But ſince the deſires

of many after mutual embraces are so impetuous that not having an opportunity to enter into a married state, they have anticipated the pleasures of matrimony, and lost their virginity before hand: and yet, perhaps, have afterwards pretended to bring their virginity to a marriage bed, by which means many an honest man has been deceived, and meretricious woman escaped with impunity: on the other hand, some virtuous young virgins, that have come such to their husband's beds, have been accused by the ignorance and credulity of their husbands, to have lost their virginity before hand, when there has been no such matter; therefore to do right in this case to both parties, my design in this chapter is to shew what virginity is, wherein it consists: how many ways it may be lost, and how a man may know that it is so or not: that so women may not be wrongfully censured, or men imposed upon.

Virginity untouch'd and taintless, is the boast and pride of the fair sex. But they generally commend it to put it off: for, as good as it is, they care not how soon they are honestly rid of it. And I think they are in the right of it, for if kept it grows useless, or at least looses so much of its value; a stale virgin, (if such a thing there be) being looked upon like an old almanack out of date. But to speak to the purpose virginity is the chief, the prime, the best of any thing, and is properly the integrity of a woman's privities, not violated by man, or not known by him, it being the distinguished characteristic of a virgin, that she has not known man.

To make this more plain, I must here observe, that there is in maids, in the neck of the womb, a membraneous production called the Hymen, which is like the bud of a rose half blown, and this is broken in the first act of copulation with man: and hence comes the word *Deflora* to deflower; whence the taking of virginity, is called deflowering a virgin: for when the rose bud is expanded, virginity is lost. Certain it is there is in the first act of copulation something that causes pain and bleeding: which is an evident sign of virginity. But what this is authors are not agreed on. Some say it is a nervous menbrane, a thin skin with small veins, that bleeds at the first penetration of the yard. Others say it is the four caruncles, knobs, or little buds like myrtle-berries, which are plump and full in virgins, but hang loose or flaggy in those who have used copulation, being prest by the yard. Some have observed the fleshly circle about the Nymphae, or neck of the womb, with little obscure veins, which make the membrane not to be nervous but fleshy. But setting aside condjectures, the Hymen, or Claustrum Virginale, is a thin membrane interwoven with fleshy fibres, and endowed with many little arteries and veins, spread across the passage of the vagina, behind the insertion of the bladder, with a hole in the midst for the menses to flow, so big, that it will admit the top of one's little finger. This is that which is called the Zone, or girdle of chastity; and where it is found in the form described, it is a certain note of virginity; but in the first act of copulation it is necessarily violated, and then it is generally accompanied with an

effusion of blood, which blood, is called the flower of virginity; and when once broke, it never closes again.

SECTION II.

How virginity may be lost.

In the former section I have shewn in what virginity consists, and that it is lost by the first penetration of the yard, which may be easily known by its being attended with an effusion of blood upon the rupture of the Hymeneal membrane, or Claustrum Virginale; but I must do the fair sex this justice, to let the world know, that although wherever this is found, it is an undoubted token of virginity, yet it will not follow, that where this token is wanting, virginity is deflowered; for the hymen may be corroded by acrimonious and fretting humors flowing through it with the menses, or it may be violated by the inversion or falling out of the uteras, or of vagina or sheath, which sometimes happens even to virgins; or (which all virgins should beware of, for, the preservation of their credit, and preventing of suspicion) perhaps the unwary bride has had her menses but a day or two before, in which case both the Hymen and inner wrinkled membranes of the vagina are flaggy, weak and relaxed, so that no such rapture or effusion may happen. It were better therefore that when virgins are about to marry, they would fix their wedding day at least six or seven days after the menses have done flowing.

But further, nature hath given greater desires after enjoyment to some than to others, and such, though they abstain from enjoyment, yet so great is their desire after it, that they may break the Hymen or Claustrum Virginale; and sometimes it iches to that degree, that they put in their finger, and so break it. Sometimes the midwives break it in the birth; and sometimes it is done by stoppage of urine, coughing, violent straining, or sneezing; so that no bleeding at the first penetration of the husband is not always a sign of unchastity, or that another has been there before him, seeing that the hymenial membrane may be broke so many other ways; but where bleeding does flow, it is an undeniable token that the person was a virgin, and never knew man before. And indeed, tho' the Hymen may be broke all these ways mentioned, yet it so rarely happens to be broke any other way, that Leo Africanus makes mention of it as a general custom of the Africans at their weddings, that the marriage ceremony being over, the bride and bride groom are shut up in a chamber while the wedding dinner is preparing; an ancient woman stands at the door to receive from the bridegroom a sheet, having the bloody token of the wife's virginity, which she shews in triumph to all the guests, and then they feast with joy; but if there is no blood seen, the bride is to be sent home again to her friends with disgrace, and the disappointed guests go home without their dinner.

There are others, that make the straightness of the privities a sign of virginity, but this is a very uncertain rule; for this depends much upon the age, habit of the body, and other circumstances. But, though women who have used carnal copulation,

are not so straight as virgins, yet this cannot be a certain argument of virginity, because the privities may be made straight by the use of astringent medicines I have heard of a courtezan, who, though she had been married, gave herself out to be a virgin, and by the help of a bath of comfrey roots deceived those with whom she had to do.

Others judge of lost virginity by the milk of the breast; but such perhaps, are ignorant that there is a twofold milk; the one of virgins, the other of such as have conceived or brought forth children: that of virgins is a malady contrary to nature, made of blood from the womb; turned into milk by the faculty of the breasts; the other is natural, where there is a child either in the womb or born: yet the milk (though both are white) differs very much both in respect to the blood, and diversity of veins that bring it to the breasts: and that of virgins is thinner, less in quantity and not so sweet; therefore if virgins happen to have such milk, they are not for that reason to be reckoned unchaste.

Upon the whole the sum of what I have said upon this head of virginity, terminates in this; that when a man is married and finds the tokens of his wife's virginity, upon the first act of copulation, he has all the reason in the world to believe her such, but if he finds them not, he has not reason to think her devirginated, if he finds her otherwise sober and modest: Seeing the Hymen may be broken so many other ways, and yet the woman both chaste, and virtuous. Only let me caution virgins to take all imaginable care to keep their virgin zone entire, that so when they marry, they may be such as the great Caesar wished his wife to be, not only without fault but without suspicion also.

Thus have I virgin innocence survey'd,
And shew'd the difference betwixt wife and maid,
And that their chastity they need not fear,
Whose virgin token plainly doth appear,
Nor censure those in whom they do not so,
Unless the contrary they plainly know,
For they may yet unspotted virgins be,
Although their virgin tokens none can see.

ARISTOTLE's MASTER PIECE:

PART II.

The secrets of nature displayed in the Production of Man.

CHAPTER I.

What conception is; what is prerequisite thereunto; how a woman may know whether she hath conceived, and whether a boy or a girl.

SECTION I.

Of conception, what it is, &c.

HAVING, in the first part of this work, described the instruments of generation in both sexes, and the use for which those instruments were intended by nature, I shall, in the part before me, proceed to shew what conception is: the signs and tokens thereof, and what are the prerequisites thereunto: for when once a woman has conceived the work of generation is begun, time, with nature's help, will perfect the work.

Now in conception, that which is first to be regarded, and without which it cannot be, is the seed of the man, that being the active principle, or efficient cause of the foetus, the matter of which is arterial blood, and animal spirits which are elaborated into seed in the testicles, and from thence by proper vessels conveyed into the yard, and in the act of copulation, it is injected or emitted into the womb. The next thing is the passive principle, to the foetus (for there must be both in order to conception) and this is an ovum, or egg, impregnated by the man's seed, or being conveyed to it, the womb closes up, that no air may enter therein but the impregnated ovum may swell into a foetus. This is that which is truely and properly conception, and the prerequisites thereunto I shall make the subject of the next section.

SECTION II.

Of the prerequisities to conception.

I have shewn in the former section, that there are two things to be regarded chiefly in conception, to wit, the active and passive principle. This in part shews, that difference of sexes is a prerequisite to conception. So nature has ordained there must be a proper vehicle for the active principle to be injected thereinto and there must also be a passive principle to be impregnated thereby, so the woman has no active principle to impreg-

nate, and therefore, without different ſexes, there can be no conception.

But this is not all: for it is not enough that there be different ſexes, theſe different ſexes muſt unite, and there muſt be coition, in order to conception; and it is coition, or the mutual embraces of both ſexes, which nature has made ſo deſirable to each other: which, when authorized in the way that heaven has ordained, there is no need of raviſhing: for the fair bride will quickly meet her bridegroom with equal vigor. But ſince in that there may be overdoing, and ſuch errors committed by their giving way to the impetuoſity of their deſires, as may be prejudicial to conception, it will not be amiſs to give ſome directions to make this operation the more effectual.

SECTION III.

A word of advice to both ſexes: or, Directions reſpecting the act of Coition or carnal copulation.

Though there are ſome that deſire not to have children, and yet are very fond of nocturnal embraces, to whom theſe directions will be no way acceptable, becauſe it may probably produce thoſe effects which they had rather be without; yet I doubt not but the generality of both ſexes, when in a married ſtate have ſuch a deſire to produce the fair image of themſelves, that nothing can be more welcome to them than thoſe directions that may make their mutual embraces moſt effectual to that end: and therefore let none think it ſtrange that we pretend to give directions for the promoting that which nature itſelf teacheth all to perform; ſince 'tis no ſoleciſm for art to be a handmaid to nature, and to aſſiſt in her nobleſt operations. Neither is it the bare performing of that act which we here direct to, but the performing it ſo as to make it conducive unto the work of generation. And ſince this act is the foundation of generation, and without which it cannot be, ſome care ought to be taken, and conſequently ſome advice given how to perform it well: and therein I am ſure the proverb is on our ſide, which tells us that what is once well done, is twice done. But yet what we ſhall advance on this nice ſubject, ſhall be offered with ſuch caution, as not to give offence to the chaſteſt ear, nor put the fair ſex to the trouble of bluſhing What I ſhall offer will conſiſt of two parts. Firſt ſomething previous to it; and ſecondly, ſomething conſequential to it.

For the firſt, when married perſons deſign to follow the propenſions of nature for the production of the fair image of themſelves, let every thing that looks like care and buſineſs be baniſhed from their thoughts, for all ſuch things are enemies to Venus; and let their animal and vital ſpirits be powerfully exhilarated by ſome brisk and generous reſtoratives; and let them, to invigorate their fancies, ſurvey the lovely beauties of each other, and bear the bright ideas of them in their minds; and if it happens, that inſtead of beauty there is any thing that looks like imperfection or deformity (for nature is not alike bountiful to all) let them be covered over with a veil of darkneſs and oblivion. And ſince the utmoſt intention of deſire is required in this act, it may not be amiſs for the bridegroom for the more eager

heightening of this joy, to delineate the ſcene of their approaching happineſs to his fair languiſhing bride in ſome ſuch amorous rapture as this,

Now, my fair bride, now will I ſtorm the mint
Of love and joy, and rifle all that's in't.
Now my infranchis'd hand on every ſide,
Shall o'er thy naked poliſh'd ivory ſlide,
Freely ſhall now my longing eyes behold,
Thy bared ſnow and thy undrained gold:
Nor curtain now though of tranſparent lawn,
Shall be before thy virgin treaſure drawn.
I will enjoy thee now my faireſt come,
And fly with me to love's elyſium,
My rudder with thy bold hand, like a try'd
And skillful pilot, thouſhalt ſteer, and guide,
My bark in loves dark channel, where it ſhall
Dance, as the bounding waves do riſe and fall.
Whilſt my tall pinnace in the Cyprian ſtrait,
Rides ſafe at anchor and unlades the freight.

Having by theſe and other amorous acts (which love can better dictate than my pen) wound up your fancies to the higheſt ardor, and deſires,

Perform thoſe rights nature and love requires,
'Till you have quench'd each other's am'rous fires.

When the act of coition is over, and the bridegroom has done what nature prompted him to do, he ought to take care not to withdraw too precipitately from the field of love, leſt he ſhould, by ſo doing, let the cold into the womb, which might be of dangerous conſequence. But when he has given time for the matrix to cloſe up, he may withdraw, and leave the bride to her repoſe which ought to be with all the calmneſs poſſible, betaking herſelf to reſt on the right ſide, and not removing without great occaſion, till ſhe has taken her firſt ſleep. Coughing and ſneezing, if poſſible, ſhould be avoided, or any thing that agitates or cauſes a motion of the body. Theſe amorous engagements ſhould not be often repeated till the conception is formed. And it may not be amiſs to remind the bridegroom, that the fair laſts all the year, and that he ſhould be careful not to ſpend his ſtock laviſhly, as women in general, are better pleaſed in having a thing once well done than often ill done

SECTION IV. *How a woman may know when ſhe has conceived.*

After the means made uſe of in order to conception, according to the directions given before, there is reaſon to expect that conception ſhould follow: but as things do not always ſucceed according to deſire, ſo therefore conception does not always follow upon coition For there are many women, eſpecially thoſe newly married, who know not whether they have conceived or not; after coition: which, if they were aſſured of, they might and would avoid ſeveral inconveniences which they now run upon For after conception a woman finds an alteration in herſelf, and yet knows not from whence it ariſes, ſhe is apt to run to the doctor and enquire of him what is the matter, who not knowing that ſhe is with child, gives her a ſtrong portion, which certain-

ly deſtroys the conception. There are others, who out of fooliſh bathful coyneſs, though they know that they have conceived yet will not confeſs it, that they may be inſtructed how to order themſelves accordingly. Thoſe that are coy may learn in time to be wiſe; and for the ſake of thoſe that are ignorant, I ſhall ſet down the ſigns of conception, that women may know thereby, whether they have conceived or not.

If a woman hath conceived, the vein under her eye will be ſwelled, *i. e.* under the lower eyelid, the vein in the eyes appearing clearly, and the eyes ſomething diſcolored; if the woman hath not her turns upon her, nor hath watched the night before, there is a certain ſign of her having conceived; and this appears moſt plainly juſt upon the conception, and holds for the firſt two months after. Stop the urine of the woman cloſe in a glaſs or bottle three days, at the expiration of which time ſtrain it through a linen rag: if you perceive ſmall living creatures in it you may inſtanly conclude that ſhe hath conceived: for the urine, which was before part of her own ſubſtance, will be generative as well as its miſtreſs.

A coldneſs and chillneſs of the outward parts after copulation, ſhews a woman to have conceived, the heat being retired to make the conception; and then the veins of the breaſt are more clearly ſeen than they were before. The tops of the nipples look redder than formerly; the body is weakened, and the face diſcolored, the belly waxeth very fat, becauſe the womb cloſeth itſelf together to nouriſh and cheriſh the ſeed. If ſhe drinks cold water, a coldneſs is felt in the breaſts: ſhe has alſo a loſs of appetite, ſour belchings, and exceeding weakneſs of the ſtomach; the breaſts begin to ſwell, and wax hard, not without pain or ſoreneſs; wringing or griping pains like the cramp, happen in the belly above the naval; alſo divers appetites and longings are engendered. The veins of the eyes are alſo clearly ſeen, and the eyes ſeem ſomething diſcolored as a looking glaſs will ſhew. The excrements of the guts are voided painfully, becauſe the womb ſwelling thruſteth the right gut together: likewiſe let her take a green nettle and put it into her urine, cover it cloſely, and let it remain all night: if ſhe is with child it will be full of red ſpots on the next morning, if ſhe is not with child it will be blackiſh.

By theſe experiments ſome of which never fail, a woman may know whether ſhe hath conceived or not, and to regulate herſelf accordingly: for

When women once with child conceived are,
They of themſelves ſhould take eſpecial care.

SECTION V.

How to know whether a woman be conceived of a male or female Child.

In the preſent ſection I ſhall endeavor to gratify the curioſity of many perſons who are very deſirous to know whether they are conceived of a male or female. For the ſatisfaction of ſuch I ſhall give the ſign of a male child being conceived, and the reverſe thereof that of a female.

It is then a ſign of a male child, when the woman feels it firſt on the right ſide: for male children lie always on that ſide of

the womb, the woman alſo when riſing from her chair, doth ſooner ſtay herſelf upon the right hand than on the left. Alſo the belly lies rounder and higher than when it is a female. The color of the woman is not ſo ſwarthy, but more clear than when it is a girl. The right ſide is more plump and harder than the left, the right nipple redder. She likewiſe breeds a boy eaſier and with leſs pain than a girl, and carries her burthen not ſo heavily but is more nimble and ſtirring.

I will only, as to this, add the following experiments, which I never knew fail. If the circle under the woman's eyes, which is of a wan blue color, be more apparent under the right eye, and that moſt diſcolored, ſhe is with child of a boy; if the mark be moſt apparent in her left eye, ſhe is with child of a girl. The other is, let her drop a drop of her milk in a baſon of fair water, if it ſinks to the bottom as it drops in, round in a drop, it is a girl ſhe is with child of; for if it be a boy it will ſpread and ſwim at the top. This I have often tried and it never failed.

For whether male or female child it be
You have conceived, by theſe rules you'll ſee.

CHAP. II.

SEC. I. *How a Woman ſhould order herſelf in order to Conception.*

I AM very well ſatisfied that many women deſire copulation, not from any delight or ſatisfaction they take therein, more than as it is the means appointed By Him that bids us increaſe and multiply, for the obtaining of children, and the propagation of mankind. And though ſeveral make uſe of coition to obtain that end, yet we find by experience, that in many, it does not ſucceed, becauſe they order not themſelves as they ought to do; for though it muſt be granted, that all our endeavors depend upon the divine bleſſing, yet if we are wanting in any thing to ourſelves how can we expect that bleſſing to ſucceed our endeavors? My buſineſs therefore in this ſection ſhall be to ſhew how women that deſire to have children ſhould order themſelves.

Firſt, women that are deſirous to have children, muſt, in order thereunto, give themſelves to moderate exerciſe; for want of exerciſe, and idleneſs, are very great enemies to the work of generation, and indeed are enemies both to ſoul and body. Thoſe that ſhall give themſelves the trouble to obſerve it will find thoſe city dames that live high, and do nothing, ſeldom have children, or if they have, they ſeldom live; whereas, thoſe poor women that accuſtom themſelves to labor, have many children, and thoſe ſtrong and luſty. Nor need we wonder at it, if we conſider the benefit that comes by a moderate exerciſe and labor; for it opens the pores, quickens the ſpirits, ſtirs up the natural heat, ſtrengthens the body, ſenſes and ſpirits, comforts the limbs, and helps nature in all her exerciſes, of which procreation of children is none of the leaſt.

Secondly, women in order to conception, ſhould avoid all manner of diſcontent and the occaſion of it; for diſcontent is a great enemy to conception, and it ſo diſpirits either man or woman, that it hinders them from putting forth that vigor, which ought to be exerted in the act of coition. When on the con-

trary, content and satisfaction of mind dilate the heart and arteries, whereby the vital blood and spirits are freely distributed throughout the body and thence arise such affections, as please, recreate and refresh the nature of man, as hope, joy, love, gladness, and mirth Nor does it only comfort and strengthen the body, but also the operation and imagination of the mind: Which is so much the more necessary: in so much the imagination of the mother works forcibly upon the conception of the child Women therefore, ought to take great care that their imagination be pure and clear, that their child may be well formed.

Thirdly, women ought to take care to keep the womb in good order: and to see that the menses come down as they ought to do, for if they are discolored they are out of order. But if the blood comes down pure, then the women will be very prone to conceive with child, especially if they use copulation in two or three days after the monthly terms are stayed.

Fourthly, a woman that would conceive should observe that she does not use the act of coition too often; for satiety gluts the womb and renders it unfit for its office. There are two things demonstrate this; *i. e* that common whores (who often use copulation) have never, or very rarely any children: for the grass seldom grows in a path that is commonly trodden in. The other is, that women, whose husbands have been long absent do, after copulation with them again conceive very quickly.

Fifthly, care should be taken that the time of copulation be convenient that there may be no fear of surprize: for fear hinders conception. And then it were the best also that the desire of copulation be natural, and not stirred up by provocation; and if it be natural, the greater the woman's desire of copulation is, the more likely she is to conceive.

I will add no more, but some authors report, that a loadstone carried about a woman, not only causeth conception, but concord between man and wife; if it be true, I would have no married woman go without one, both for her own and husband's quiet.

Let all the fair, who would have children from
Their soft embraces, read what's here laid down,
Those that to exercise themselves incline,
And in their love to be content design,
Who have their monthly terms in order flow;
And regulate them if they do not so;
That love's embraces moderately use,
And to enjoy them a fit season chooze;
These may, content with what they've done, remain,
And need not fear their wishes to obtain.

SECT. II. *What a woman ought to observe after conception*

After a woman has conceived, or has reason to think so, she ought to be very careful of herself lest she should do any thing that might hinder nature in her conception For in the first two months after conception women are very subject to miscarriages, because then the ligaments are weak and soon broken.

To prevent this, let the woman every morning drink a draught of ſage ale and it will do her abundance of good.

And if ſigns of abortion or miſcarriage appear, let her lay a toaſt dipped in tent (in caſe muſcadel cannot be gotten) to the navel, for this is very good Or, take a little green tanſy, and having bruiſed it ſprinkle it with muſcadel, and apply it to the navel, and ſhe will find it much better. Alſo tea infuſed in ale, like ſage ale, and a draught drank every morning, is moſt excellent for ſuch women as are ſubject to miſcarriages. Alſo take juice of tanſy, clarify it, and boil it up into a ſyrup, with twice its weight in ſugar, and let a woman take a ſpoonful or two of it in ſuch caſes, and it will be an excellent preſervative againſt miſcarriages. Alſo if ſhe can, let her be where the air is temperate. Let her ſleep be moderate; let her alſo avoid all watching and immoderate exerciſe, as alſo diſturbing paſſions, loud clamors and filthy ſmells; and let her abſtain from all things which may provoke either urine or the courſes, and alſo from all ſharp and windy meats; and let a moderate diet be obſerved. If the excrements of the guts be retained, lenify the belly with clyſters made of the decoction of mallows and violets, with ſugar and common oil; or make broth of borage, bugloſs, beets, mallows, and take therein a little manna but on the contrary, if ſhe be troubled with a looſeneſs of the belly, let it not be ſtopped without the judgment of a phyſician; for that matter all uterine fluxes have a malignant quality and muſt be evacuated and removed before the flux be ſtayed.

CHAP III.

How the Child lieth and how it groweth up in the womb of the Mother after conception.

SECTION I

How the child is formed in the womb after conception.

AS To the formation of the child, it is to be noted, that after coition the ſeed lies warm in the womb for ſix days, without any viſible alteration, only that the womb cloſes up itſelf to prevent its iſſuing forth again, and for the ſecuring it from any cold, and all this time it looks like butter or coagulated milk. And it would be neceſſary for her who has conceived, to forbear the embraces of her husband all the time, leſt the conception ſhould be ſpoiled. In three days after, it is altered from the quality of thick milk or butter, and becomes blood, or at leaſt reſembles it in color, nature having now begun to work upon it; in the next ſix days following, that blood begins to be united into one body, grows hard and becomes a little quantity, and to appearance a round lump. And, as in the firſt creation the earth was void and without form, ſo in this creating work of divine power in the womb; in this ſhapeleſs embryo lies the firſt maſs. But in two days after the principal members are formed by the plaiſtic power of nature, and theſe principal members are four in number, viz The heart, the brain, the liver, and the teſticles or ſtones.—Three days after the other members are formed, and are diſtinguiſhed from the ſhoulders to the knees, and the heart, liver and ſtones, with their appurtenances, do grow bigger and bigger. Four days after that, the ſeveral mem-

bers of the whole body appear, and as nature requires, they conjunctly and severally do receive their perfection. And so in the appointed time, the whole creation hath that essence which it ought to have in the perfection of it, receiving from God a living soul, therewith putting in its nostrils the breath of life. Thus I have shewn the whole operation of nature in the formation of the child in the womb, according to the energy given it by the Divine Creator, Maker, and upholder of all things both in heaven and earth.

By some others more briefly, but to the same purpose, the forming of the child in the womb of its mother is thus described; three days in the milk, three in the blood, twelve days from the flesh, and eighteen the members, and forty days afterwards the child is inspired with life, being endowed with an immortal living soul.

Section II

Of the manner of the child's lying in the womb from the conception to the birth.

I come now to shew in what manner the child lieth in the womb of its mother, whilst it is confined in the dark recesses; first giving the reader the testimony of two or three of the most learned on this head.

The learned Hippocrates affirms that the child, as he is placed in the womb, hath his hands upon his knees, and his head bent to his feet; so that he lies round together, his hands upon his knees, and his face between them; so that each eye touches each thumb and his nose betwixt his knees. And of the same opinion in this matter was Bartholonius the younger. Columbus is of opinion that the figure of the child in the womb is round, the right arm bowed, the fingers thereof under the ear, above the neck, and the head bowed, so that the chin toucheth the breast, the left arm bowed above both breast and face, and proped up by the bending of the right elbow: the legs are lifted upwards, the right of which is so lifted up, that the thigh toucheth the belly, the knees, the navel, the heel toucheth the left buttock, and the foot is turned back and covereth the secrets: the left thigh toucheth the belly, and the leg lifted up to the breast, the back lying outwards.

Thus the reader may see how authors differ herein: but this ought to be noted, that the different positions which the child hath been seen in, hath given occasion to the different opinions of authors. For when the woman is young with child the embryo is always found of a round figure, a little oblong, having the spine moderately turned inwards, the thighs folded, and a little raised, to which the legs are joined, that the heels touch the buttocks, the arms bending, the hands placed upon the knees towards which the head is inclined forwards so that the chin touches the breast; the spine of the back is at that time placed towards the mother's, the head uppermost, the hands forwards, and the feet downwards, and proportionable to its growth it extends its members by little and little, which were exactly formed in the first month. In this posture it usually keeps till the seventh or eighth month, and then by a natural pro-

penſity and diſpoſition of the upper parts of the body the head is turned downwards towards the inward orifice of the womb, tumbling as it were over its head; ſo that the feet are uppermoſt, and the face towards the mother's great gut. And this turning of the infant in this manner with his head downwards, towards the latter end of a woman's reckoning is ſo ordered of nature, that it may be the better diſpoſed for the birth. The knowledge of theſe things being ſo eſſential to the practice of a midwife, I could not omit them

CHAP. IV.

Of the Obſtructions of conception; with the Cauſe and Cure of Barrenneſs, and the Signs of Inſufficiency both in Men and Women

BEFORE I proceed any further, it is highly neceſſary that I treat of the inſtructions of conception, which naturally leads me to treat of barrenneſs the grand obſtruction of conception.

SECTION I. *Of barrenneſs.*

Barrenneſs is a natural or accidental defect which hinders conception: for that which hinders conception cauſeth barrenneſs. There are ſeveral cauſes why conception may be hindered: as too much heat or cold dries up the ſeed and makes it corrupt: this, extinguiſhing the life of the ſeed, and that, making it waterish, and unfit for generation. It may be cauſed alſo by the ſtoppage or overflowing of the courſes, and by ſwelling ulcers, or inflamations of the womb, or by an excreſcence of fleſh growing about the mouth of the matrix, whereby the ſeed is hindered from being injected into the womb, and want of love in the perſons copulating may alſo hinder conception, as is apparent from thoſe women who are deflowered againſt their will; no conception following any forced copulation.

And here let me caution parents againſt one thing that often cauſeth barrenneſs, which might eaſily be prevented; and that is, againſt virgins letting blood in their arm before their courſes come down, theſe come down in virgins uſually in the 14th year of their age, ſeldom before the thirteenth, but never before the twelfth. Now, becauſe uſually a young virgin is out of order before the firſt break down, the mother goes with her to the doctor, who finding that fulneſs of blood is the occaſion of her illneſs orders her to let blood in the arm: upon which ſhe becomes well for a time, the ſuperfluous blood being taken away; and this remedy which is worſe than the diſeaſe, being repeated four or five times, the blood comes not down at all to the womb, as it doth in other women, but dries up, and is forever barren; whereas, had ſhe been let blood in the foot it would have brought the blood downwards, and ſo have provoked the terms and prevented miſchief.

Another cauſe of barrenneſs is, for want of convenient, moderate quality, which the woman ought to have with the man; as, if he be hot ſhe muſt be cold; if he be dry, ſhe moiſt; but if they both are dry or both are of a moiſt conſtitution, they cannot propagate, though in this caſe neither of them may be barren, ſingly conſidered: for he or ſhe though now as barren as the barren fig tree, yet joined with an apt conſtitution, may become as fruitful as the vine.

Another cauſe of barrenneſs may be the diſuſe of copulation for ſome there are of that frigid conſtitution, that they either uſe not the means at all, or elſe perform it with ſo much langor and coldneſs, that it is not likely it ſhould prove efficacious; for the act of coition ſhould be performed with the greateſt ardor and intenſeneſs of deſire imaginable, or elſe they may as well let it alone; a frigid diſpoſition being the effect of a cold diſtemper and muſt be cured by ſuch things as heat and nouriſh. For,

Without good drink and feeding high
Deſires of Venus ſoon will die.

Such therefore ought to feed upon cock ſtones and lamb ſtones, ſparrow's, partridge's, quail's, and pheaſant's eggs, for 'tis an infallible aphoriſm in phyſic, that whatſoever any creature is extremely addicted to, they operate to the ſame end by their mutual virtue in the man that eats them. Therefore partridges, quails, ſparrows, &c. being extremely addicted to venery, they work the ſame effect in thoſe that eat them: and this likewiſe is worthy to be noted that in what part of the body the faculty is ſtrong, as a medicine: as for inſtance the virtus procreativus lies in the teſticles; therefore cock ſtones, &c. are medicinal in this diſtemper. Let ſuch perſons alſo eat ſuch food as is very nouriſhing, as parſnips, aliſanders, skirrets, and pine nuts: and let them take a dram of diaſatryon in an electuary every morning. The ſtones of a fox dried to powder a dram taken every morning in tent, is alſo very good in this caſe: and ſo alſo is a dram of ſatyrion root, taken in like manner.

SECTION. II.

Of the ſigns of Inſufficiency in Men; and barrenneſs in women.

After married people have lived long together, and both ſeem likely, and yet neither of them have children, there often ariſes diſcontent between them, and both are troubled becauſe they know not whoſe fault it is. And though authors have left ſeveral ways to know whether the man or woman be defective, yet becauſe I cannot coincide in their judgments, I ſhall paſs them by in ſilence, and rather lay down a few rules that may be depended upon, than many that are uncertain. But I muſt firſt premiſe that women are ſubject to many infirmities more than men, that the cauſe of barrenneſs is oftener on their ſide that man's. For, if the man has the inſtrument of generation perfect, being in health, and keeping a regular and temperate diet and exerciſe I know no accidental cauſe of barrenneſs in him: whereas the cauſe of barrenneſs in a woman lies in her womb, and the infirmities incident thereunto: ſome of which are ſtopping of the menſtrua, or their overflowing; as alſo the falling out thereof, and the inflamation, windineſs, heat and dryneſs thereof for each of which we will preſcribe proper cures.

But to be more particular.

If a man or woman, in whom the inſtruments of generation appear no ways defective would know whether the cauſe of barrenneſs be in themſelves or their bedfellow, let them take a handful of barley, or any other corn that will grow quickly,

and ſteep half of it in the urine of a man and the other half in the urine of a woman during the ſpace of 24 hours, then take it out, and ſet each by itſelf in a flower pot or where you may keep them dry. Then water the man's every morning with his own urine, and the woman's with hers: and that which grows is moſt fruitful; and that which does not grow denotes the perſon to be barren. Nor let any deſpiſe this trial: for ſeeing phyſicians will by urine undertake to tell a perſon of his or her diſeaſes, why ſhould not urine alſo ſhew whether a perſon be fruitful or not? But if in man the inſtrument of generation is not perfect it will be obvious to the ſight, and if the yard be ſo feeble, that it will not admit of erection, it can never convey ſeed into the womb, nor can there be in ſuch a caſe any conception. But this is ſo plain and eaſily diſcerned, that it needs muſt be obvious to both parties and the man who finds himſelf debilitated ought not to marry.

The caſe can't be ſo bad with the woman, though ſhe may be barren, but what her husband may make uſe of her, unleſs ſhe be impenetrable, which (though it ſometimes does) but rarely happens: and therefore the man is the moſt inexcuſable if he tranſgreſs.

Beſides what I have already mentioned, ſigns of barrenneſs in women are; if ſhe be of an over hot conſtitution, of a dry body, ſubject to anger, hath black hair, a thick pulſe, her purgations flow little, and that with pain, and yet hath a violent deſire to coition: but if ſhe be of a cold conſtitution, then are the ſigns contrary to thoſe recited. If barrenneſs be cauſed through an evil quality of the womb, it may be known by making a fumigation of red ſtorax, myrrh, caſſiawood, nutmeg, cinnamon, and letting her receive the ſtume of it into her womb, covering her very cloſe. If the odor paſſeth through the body up into the mouth and noſtrils, ſhe is fruitful. But if ſhe feel not the ſame in her mouth and noſe, it denotes barrenneſs one of theſe ways, viz. That the ſeed is either through cold extinguiſhed, or through heat diſſipated. And if a woman be ſuſpected to be unfruitful, caſt natural brimſtone, ſuch as is digged out of the mine, into her urine, and if worms breed therein ſhe is fruitful. But this ſhall ſuffice, to be ſaid of the cauſes and ſigns of barrenneſs, and it is now time to proceed to the cure.

SECTION III. *Of the cure of barrenneſs.*

In the cure of barrenneſs reſpect muſt be had to the cauſe; for the cauſe muſt be firſt removed, and then the womb ſtrengthened, and the ſpirits of the ſeed enlivened by corroborating applications.

If barrenneſs proceeds from over much heat, let her uſe inwardly, ſuccory, endive, violets, water lilies, ſorrel, and lettuce, white ſyrrups, and conſerves made thereof, thus,

Take conſerve of borage, violets, ſuccory, water lilies of each one ounce, half an ounce of conſerve of roſes: diamagarition frigid, diatrion. fancalon, of each half a dram: with ſyrup of violets, or of juice of citron make an electuary.

Let her alſo take of endive, water lilies, borage flowers, of each a handful, reubarb, myrobalans, of each three drams; with water make a decoction; add to the ſtraining, the ſyrup relaxative of violets one ounce, ſyrup of caſſia, half an ounce manna three drams: make all into a portion. Take of the ſyrup of mugwort one ounce, ſyrup of maiden hair, two ounces pulv. elect trionſat, make all up into a julep. Apply to the reins and privities fomentations of the juice of lettuce, violets, mallows vineleaves, and knightſhade; let her alſo annoint her ſecret parts with the cooling ointment of galls. Bathes are good for her to ſit in. Let the air be clear, her garments thin, her food, lettuce, endive, ſuccory, and barley: but let her have no hot meats, nor ſtrong wines, except it be wateriſh and thin. Reſt is good for her both in body and mind: but ſhe muſt uſe little copulation, but may, ſleep as much as ſhe will.

If barrenneſs be occaſioned by the predominancy of cold extinguiſhing the power of the ſeed, which may be known by her deſiring venery, and receiving no pleaſure in the act of copulation, even while the man is ſpending his ſeed; her terms are phlegmatic, thick, ſlimy, and flow not rightly: In this caſe let her take ſyrup of calamint, mugwort, betony, of each one ounce; water of pennyroyal, feverfew; hyſop, ſage of each two ounces; and make a julep. Let her take every morning two ſpoons full of cinnamon water, with one ſcruple of mithridate. Alſo let her take oil of anniſeed, one ſcruple and a half, jeſſemine, diaclylon both dinoſch diaglang, of each one dram; ſugar, four ounces; with water of cinnamon make lozenges, and take of them a dram and a half twice a day two hours before meals. Let her alſo faſten cupping glaſſes to her hips and belly; and let her take ſtoros calamita one ounce, maſtic, cloves, cinnamon, nutmeg, lignum alloes, frankincenſe, of each half an ounce, muſk, ten grains, ambergreaſe half a ſcruple, with roſe water make a confection; divide it into four parts, of one make a ponum odoratum to ſmell to, if ſhe be not hiſterical: of the ſecond make a maſs of pills, and let her take three every night, of the third make a peſſary, and put it up; of the fourth make a fumigation for the womb.

If barrenneſs ariſes from the faculties of the womb being weakened and the life of the ſeed ſuffocated by over much humidity flowing on thoſe parts, let her take of betony, marjoram, mugwort, pennyroyal, balm, of each one handful: root of onrum, fennel, elecampane, of each two drams; anniſeed, cummin ſeed, of each a dram, with ſugar and water a ſufficient quantity, of which make a ſyrup, and take three ounces every morning. Then purge with theſe pills, following, take of pil ext. two ſcruples diag. lion. two grains, ſpecies decaſto. one ſcruple; make them up into nine pills with ſyrup of mugwort. Alſo take ſpec. diagmiuae, diamoſchi diambrae, of each one dram: cinnamon one dram and a half: mace, cloves, nutmeg of each half a dram: ſugar ſix ounces, with water of feverfew make lozenges to be taken every morning. Let his wife let her take of the decoction of

ſaſaparilla and viga aurea, with a good quantity of ſage, which is an herb of that virtue, that Cornelius Agrippa honored it with the title of ſacra herba, a holy herb: and Dodoneus in his hiſtory of Plants, reports that after a great plague had happened in Egypt, which had almoſt depopulated the country, the ſurviving women were commanded to drink the juice of ſage, that they might multiply the faſter. Let her annoint her genitals with the oil of anniſſeed and ſpikenard. Trochiks to ſmoothe the womb are alſo very good. To make which, let her take mace, nutmeg, cinnamon, ſtorax, and amber, of each one dram; cloves, laden of each half a dram; turpentine, a ſufficient quantity. Laſtly, take the roots of valleron and elecampane, of each one pound; of gallangal three ounces; origan, marjoram betony, mugwort, bay leaves, calamint, of each three handfuls; with water make an infuſion, in which let her ſit after ſhe has had her courſes But to proceed.

If barrenneſs be cauſed by the dryneſs of the womb conſuming the matter of the ſeed, let her take every day almond milk and goats milk, extracted with honey; eat often of the root Satyrion candied, and of the electuary of diaſatyron. Let her alſo take three ſheep's heads, and boil them till the fleſh comes from the bones; then take of meliot violets, camomile, mercury, orchies, with the roots of each, one pound: fenugreek, linſeed, vallerian roots, of each a handful: let all theſe be decocted in the aforeſaid broth, and let the woman ſit in the decoction up to the navel. Alſo, take of deers ſuet half an ounce; cow's marrow, ſtyracis lyquide, of each one dram; or of ſweet almonds, two ounces; with ſilk or cotton make a peſſary, and make injections, only of freſh butter, and oil of ſweet almonds.

It ſometimes happens that barrenneſs is cauſed by remiſſneſs, in the manner and the act of coition; and though there be no impediment on either ſide; yet if both ſexes meet not in that act with equal vigor, no conception follows; for many times the man is too quick for the woman, or rather the woman too ſlow for the man, and is not prepared to receive the ſeed with that delight ſhe ought, when it is emitted by the man; and thoſe who follow the opinion of the ancients, that the woman contributes ſeed in the formation of the child as well as the man, are of opinion that there ought to be a joint emiſſion both of the man and woman at the ſame inſtant, which adminiſtering to both a great delight, perfects the work of conception. But if in this caſe the woman be ſlack, it will be proper for the man to follow the advice given in chapter 3d. ſect. 2. where both ſexes are ſhewn how to manage themſelves in the act of coition, that ſo by ſtirring up in the woman a deſire to venery, ſhe may meet his embraces with the greateſt ardor. If this ſhould prove ineffectual, let her before the act of coition foment the privities with the decoction of betony ſage hyſop and calamint, annoint the mouth and head of the womb with musk and civit; and the cauſe of barrenneſs being removed, let the womb be corroborated by the following applications.

Make of bayberries, maſtick, nutmeg, frankincenſe, cypreſs nuts, zadani, galbina, of each one dram: ſtyracis liquidae, two

ſcruples ; cloves half a ſcruple ; ambergreaſe, two grains ; muſk, ſix grains, then with oil of ſpikenard make a peſſary. Alſo take red roſes, with frankincenſe, lapids hamatitis, of each half an ounce, ſangus draconis, fine bole maſtic, of each two drams ; nutmeg, cloves of each one dram ; ſpikenard half a ſcruple, and with oil of wormwood make a plaiſter for the lower part of the belly. And let her eat of erringo roots candied, and make an injection of the juice of the roots of ſtatyrion ; and then let her uſe copulation ſoon after the menſes are ceaſed, conception being moſt apt to follow ; for then the womb is thirſty and dry and apteſt both to draw the ſeed and to retain it by the roughneſs of the inward ſuperfices. A woman ſhould be careful to avoid exceſs in all things, as being the greateſt enemy to conception. For ſhould a woman conceive under care, ſtudy, &c. the child would probably be fooliſh, becauſe the animal faculties of the parents were confuſed.

CHAP. V.

SEC. I. *How Women ought to govern themſelves during their Pregnancy.*

FIRST, let a woman that is with child chooſe a temperate air, not infeſted with fogs, and for that reaſon not near any marſhy grounds, rivers, &c. But this cannot be avoided by ſome, their habitation falling out to be in ſuch places. But thoſe who can live where they pleaſe ought to avoid ſuch places as likewiſe the going abroad in too hot or too cold weather : alſo when the ſouth wind blows hard, for that often proves hurtful to women with child and ſometimes cauſes abortion.

Secondly, ſhe ought to be very cautious in the matter of her diet, chooſing only thoſe meats that create wholeſome nouriſhment, and ſuch as are immoderately dry ; and let her take care to prevent and avoid immoderate faſting for that will weaken the infant, and render it of a ſickly conſtitution, and ſometimes cauſe abortion. And as all exceſſes ought to be avoided ſo ſhe muſt take care not only of avoiding immoderate faſting, but likewiſe immoderate eating too, which will not only be apt to ſtuff up the child but to ſwell it up to that degree, that it will endanger the life of itſelf and the mother in its birth. Let it ſuffice that in general ſhe avoids all meats which are too hot or too cold, and moiſt ; ſuch as ſallads, ſpices and hot meats which often cauſe the child to be born before its time ; and ſometimes without nails, which foretells a ſhort life. And therefore in this caſe the moſt wholeſome meats are pigeons, partridges, pheaſants, larks, veal, mutton, or any meat that yields a good juice, and contributes kindly nouriſhment ; as alſo, ſuch fruit as are ſweet and of eaſy digeſtion, as cherries, pears, damſons and the like. But let her avoid, as pernicious, all ſuch things as cauſe and create wind.

Care ought alſo to be taken with reſpect to her exerciſe ; which ought to be moderate for violent motion either in walking or working, is hurtful and diſturbing to the womb, eſpecially riding upon the ſtones in a coach, or any other uneven place ; and in like manner, all extraordinary ſounds and noiſes ſhould be avoided, eſpecially the ringing of bells, and the diſcharging of great

guns; neither ought she to give way to either immoderate laughing or weeping, or to anger, or any other passions, for that may be prejudicial to her.

SECTION II.

Further Rules for Women to observe during their Pregnancy.

Though the act of coition is that without which conception cannot be, yet the immoderate use of it hinders the brief end for which it was designed. In the first four months after conception, she ought not to lie with her husband, at least sparingly, lest by shaking the womb in that action, the courses should again be forced down. In the fifth and sixth months she ought to abstain; but in the 7th 8th, and 9th, it may freely be permitted by reason it opens the passage, and facilitates the birth. To contribute the better towards which, the woman should be careful to keep her body soluble; syrups and other opening things, being very helpful to nature in those operations. Let her not lace too close, lest the child be thereby hindered from coming to its full growth.

To prevent any disorder that may happen to her breasts by too much blood, which will cause curdled milk, let her wear a necklace of gold about her neck, or rather a small ingot of steel between her breasts, fomenting them a quarter of an hour every morning with water distilled from ground ivy, periwinkle and sage, being blood warm.

When her belly is swelling, and the motion is great, which will be about the fourth month, she may swathe it with a swath-band annointed with pomatum, or any other thing of the kind, to keep it smoothe and free from wrinkles. For which end it will be best to take the caul of a kid, and of a sow, of each three ounces; capon grease and goosegrease, of each one ounce and a half; having melted them all together put thereto a quarter of a pint of water; after which strain them through a linen cloth into fair water: casting it to and fro therein till it be white; at which time add to it of marrow of a red deer, one ounce, and lay it in red rose water, twelve hours. After the expiration of which you may use it, annointing the swathe and belly.

But if these ingredients are not easy to be had you may make use of the following liniament, which will do almost as well as the other; take of mutton suet (that which grows about the kidneys is best) and of dog's grease, of each two ounces, whale oil one ounce, and oil of sweet almonds, the same quantity; wash them well, after they are melted together in the water of germander, or new white wine, annoint the belly and swathe therewith. Those that care not to annoint their bellies, may make use of the following bathe or decoction: take of all sorts of mallows and mother wort, each two handfuls; white lilly roots three ounces; mellilot and camomile, of each two handfuls; lime seeds, quince seeds and fenugreek seeds, three ounces, boil them well in spring water and bathe therewith. If the woman after her quickening, finds but little motion of the infant in the womb, let her make a quilt in the manner following, and bind it to the navel, and it will much strengthen and comfort the infant; take the powder of roses, red coral and jely flowers, of each two

ounces; mastic a dram, angelica seeds two drams, ambergrease two grains, and musk two grains: all of which being well beaten, put them into a linen bag, spread them abroad and quilt it, that they may be in every part of it placing it upon the navel, and it will have the desired effect. These things are sufficient to observe during the time of their pregnancy, that neither the child nor mother may miscarry, but be brought to the birth at the the appointed time.

CHAP. VI.

Directions for Midwives how to assist Women in the Time of their Labors and how Child bearing Women should be ordered in Time of their Lying in.

Section I.

How a Midwife ought to be qualified.

A MIDWIFE ought to be of a middle age neither too old nor too young, and of a good habit of body, neither subject to diseases, fears or sudden frights; nor are the qualifications assigned to a good surgeon improper for a midwife, viz. a lady's hand, a hawk's eye, and a lion's heart: to which may be added, activity of body, and a convenient strength, with caution and diligence, not subject to drowsiness, nor apt to be impatient. She ought to be sober and affable, not subject to passion, but bountiful and compassionate, and her temper cheerful and pleasant, that she may the better comfort her patients in their sorrow. Nor must she be very hasty, though her business perhaps require her in another place, lest she should make more haste than good speed. But above all she ought to be qualified with the fear of God, which is the principal thing in every state and condition, and will furnish her on all occasions, both with knowledge and discretion. But I now proceed to more particular directions.

Section II.

What must be done when a Woman's time of labor is come.

When the time of birth draws near, and the good woman finds her travelling pains begin to come upon her, let her send for a midwife in time; better too soon than too late, and get those things ready which are proper on such occasions. When the midwife is come, let the first thing she does be to find whether the true time of birth be come. The want of observing this hath spoiled many a child, and endangered the life of the mother; or at least put her to twice as much pain as she needed; for unskilful midwives, not minding this, have given things to force down the child, and thereby disturbed the natural course of her labors; whereas nature works best in her own time and way. I do confess it is somewhat difficult to know the true time of some women's labor, they being troubled with pains so long before their true labor comes: in some, weeks before: the reason of which is the heat of the reins, which is manifest by the swelling of legs. And therefore when women with child find their legs to swell much, they may be assured their reins are too hot. Wherefore my advice to such women is, to cool their reins before the time of their labor, which may be effectually done by annointing the reins of the back with the oil of popies

and violets, or water lilies, and thus they may avoid that hard labor which they uſually undergo whoſe reins are hot, that they may the better prevent, let me recommend to you the decoction of plantain leaves and roots, which is thus made; Make a ſtrong decoction of them in water, and then having ſtrained and clarified it with the white of an egg, boil it into a ſyrup with its equal weight of ſugar, and keep it for uſe. But ſince it is ſo neceſſary for midwives to know the time of a woman's labor, the following ſection will rightly inform them.

SECTION III.

Signs by which the true Time of a Woman's Labor may be known.

When women draw near the time of their reckoning, eſpecially with their firſt child, and perceive any extraordinary pains in their belly, they immediately ſend for their midwife, as taking it for their labor, tho' perhaps thoſe pains which are ſo often miſtaken, for labor are only the cholic, and proceed from the wind, which pains though they come and go, griping the whole belly, are yet without any forcing downwards into the womb, as is done by thoſe that go before labor. But theſe cholic pains may be removed by warm clothes laid upon the belly: and the application of a clyſter or two by which thoſe pains that precede a true labor are rather furthered than hindered. There are alſo other pains incident to women in that condition from the flux of the belly, which are eaſily known by the frequent ſtools that follow them.

But to ſpeak more directly of the matter; the ſigns of labor ſome few days before are that the woman's belly, which before lay high ſinks down, and hinders her from walking ſo eaſily as ſhe uſed to do; alſo there flows from the womb ſlimy humors, which nature has appointed to moiſten and make ſmooth the paſſage, that its inward orifice may be the more eaſily dilated when there is occaſion, which beginning to open at that time, ſuffers that ſlime to flow away, which proceeds from the glands, called preſtatæ. Theſe are ſigns preceding labor,

But when ſhe is preſently falling into labor, the ſigns are great pains about the reins and loins, which coming and retreating by intervals, anſwer in the bottom of the belly by congruous throes: and ſometimes the face is red and inflamed, the blood being much heated by the endeavor a woman makes to bring forth the child: and likewiſe during the ſtrong throes her perſpiration is intercepted, which cauſes the blood to have recourſe to her face: her privy parts are ſo ſwelled by the infant's head lying in the birth, which, by often thruſting, cauſes thoſe parts to diſtend outwards. She is likewiſe much ſubject to vomiting, which is alſo a ſign of good labor and ſpeedy delivery, though by a great many ignorant women thought otherwiſe; for good pains are thereby excited and redoubled: which vomiting is occaſioned by the ſympathy there is between the womb and the ſtomach: Alſo, when the birth is near, moſt women are troubled with trembling of the thighs and legs: not with cold, like beginning of an ague fit, but with the heat of the whole body: though this indeed does not happen always. Alſo if the humors, which then flow from the womb, are diſcolored

with blood (which is what the midwife calls *sheros*) it is an infallible mark of the birth's being near: and then if the midwife put her finger up the neck of the womb, she will find the inward orifice dilated; at the opening of which the membranes of the infant, containing the waters, present themselves, and are strongly forced downwards with each pain she hath: at which time one may perceive them sometimes to resist the finger: And than again to press forward, being more or less hard and extended, according as the pains are stronger or weaker. These membranes with the water in them, when they are before the head of the child, which the midwife calls the gathering of the womb, to the touch of the fingers resembles those eggs which yet have no shell, but are covered only by a simple membrane. After this, pains still redoubling, the membranes are broken by the strong impression of the waters, which presently flow away, and then the head of the infant is presently felt naked, and presents itself at the inward orifice of the womb. When those waters come thus away, then the midwife may be assured the birth is very near; this being the most certain sign that can be; for the amnion and alantois being broken which contained those waters by the pressing forward of the birth, the child is no more able to subsist long in the womb afterwards, than a naked man in a heap of snow. Now, these waters if the child come presently after them, facilitate the labor, by making the passage slippery: and therefore let no midwife use means to force away the water: for nature knows best when the true time of the birth is and therefore retains the water till the time; but if by accident the water breaks away too long before the birth, then such things as will hasten it may be safely administered.

SECTION IV. *What is to be done at the Time of Labor.*

When the midwife is satisfied that it is the true time of labor, she must take care to get all things ready that are necessary to comfort the travelling woman in that time; and the better to do it, let her see that she be not straight laced. She may also give her a pretty strong clyster, if she finds there is occasion for it; but with this proviso, that it be done at the beginning, and before the child be too forward; for otherwise it will be difficult for her to receive it. The advantage of which clyster is, that the gut thereby will be excited to discharge itself of its excrements and the rectum being emptied, there will be more space for the dilating of the passage; likewise to cause the pains to bear more downwards, through the endeavors she makes when other necessary things for her labor are put in order, both for the mother and the child.

As to the manner of the delivery, various midwives use different ways: some are delivered sitting on a midwife's stool; but, for my own part, I think that a pallet bed girded and placed near the fire, that the good woman may come on each side, and be the more readily assisted is much the best way.

And if the laboring woman abounds with blood it may not be improper to let her bleed a little, for by that means she will both breathe the better, and have her breath more at liberty,

and likewiſe more ſtrength to bear down her pain; and this may be done without danger, becauſe the child being now ready to be born, needs not the mother's blood for its nouriſhment any longer; and not only ſo, but this evacuation does many times prevent her having a fever after delivery. Likewiſe if her ſtrength will permit, let her walk up and down her chamber; and the better to enable her thereto, let her take ſome good and ſtrengthening things, ſuch as new laid eggs, jelly broth, ſome ſpoonfuls of burnt wine; and encourage her to hold off her pains, bearing them down when they take her, all that ſhe can. And let the midwife often touch the inward orifice with her finger, that ſhe may better know whether the waters are going to break, and whether the birth will follow ſoon after; for generally the birth follows in two hours after the efflux of the water. And to help it afterwards, let her annoint the woman's privities with emolient oil, hog's greaſe, and freſh butter; eſpecially if ſhe finds them too hard, to be dilated.

Let the midwife alſo be near the laboring woman all the while and diligently obſerve her geſtures, pains and complaints for by this ſhe may gueſs pretty well how her labor goes forward; for when ſhe changes her groans, into loud cries it is a great ſign the birth is near; at which time her pains are greater and more frequent. Let her alſo ſometimes reſt herſelf on her bed, to renew her ſtrength but not too long at a time, for to lie too long at a time will retard her labor, and therefore 'tis better for her to walk about her chamber as much as ſhe can; which, that ſhe may the better do let the good woman ſupport her under her armes, if it be neceſſary; for by walking, the weight of the child cauſes the inward orifice of a woman to dilate much ſooner than it would do if ſhe lay upon her bed; beſides her pains, by walking will be ſtronger and more frequent and in conſequence her labor will not be near ſo long. If ſhe finds any ſick qualms let her not be diſcouraged; and if ſhe finds any motions to vomit, let her not ſuppreſs them, but rather give way to them; for it will (however uneaſy and irkſome they be for the preſent) be much for her benefit, becauſe they further the pains, and provoke downward.

SECTION V.

How to provide the birth, and cauſe ſpeedy delivery.

When the birth is long deferred after the coming down, on the waters, let her haſten the birth by drinking a good draught of wine wherein ditany, red coral, juniper berries, betony, pennyroyal, and feverfew, have been boiled or the juice of feverfew taken in its prime (which is in May) and clarified and ſo boiled in a ſyrup, and twice its weight of ſugar is very good upon this occaſion. Alſo mugwort uſed in the ſame manner, works the ſame effect. And ſo alſo does a dram of cinnamon in powder, given inwardly, or tanſey bruiſed and applied to the privities. Likewiſe the ſtone Ætitis held to the privities does in a very little time draw forth the child and the after burden; but great care muſt be taken to remove it gently, or elſe it will draw forth the womb and all, ſo great is its magnetic virtue. Alſo a decoction of ſavory made with white wine, and drank, gives a

woman ſpeedy delivery. Alſo wild tanſey or ſilver weed bruiſed and applied to the woman's noſtrils is very good. So alſo are date ſtones beaten to powder, and half a dram of them taken in white wine; parſley is of excellent uſe on this occaſion; for if you bruiſe it and preſs out the juice, and then dip a linen cloth in it, and put it up, being ſo dipped, in the mouth of the womb, it will preſently cauſe the child to come away, though it be dead, and will bring away the after burden alſo. The juice of parſley being of great virtue eſpecially the ſtone parſley, being drank by a woman with child it cleareth not only the womb, but alſo the child in the womb, of all groſs humors. A ſcruple of caſtorum in powder, in any convenient liquor, is very good to be taken in ſuch a caſe, and ſo alſo are two or three drops of ſpirit of caſtorum in a convenient liquor. Eight or nine drops of the ſpirit of myrrh, given in a convenient liquor, have the ſame effect. Or, give a woman in travail another woman's milk to drink, it will cauſe ſpeedy delivery. Alſo the juice of leeks being drank with warm water hath a mighty operation, cauſing ſpeedy delivery. Take piony ſeeds beat them to powder and mix the powder with oil; with which oil annoint the loins and privities of the woman with child; it gives her deliverance very ſpeedily, and with leſs pain than can be imagined. And this may be noted for a general rule, that all thoſe things that move the terms are good for making the delivery eaſy. There are ſeveral other things efficacious in this caſe; but I need not heap medicines unneceſſarily, thoſe I have already named being ſufficient.

When any of the forenamed medicines have haſtened the birth let the midwife lay the woman in a poſture for delivery. And firſt let the woman be conducted to the pallet bed placed at a convenient diſtance from the fire, according to the ſeaſon of the year; and let there be a quilt laid upon the pallet bedſtead, which is better than a feather bed, and let it have thereon a linen cloth in many folds, with ſuch other things as are neceſſary, which may be changed according as the occaſion requires it, that ſo the woman may not be incommoded with blood, waters, and other filth, which are voided in labor. Then let her lay the woman upon her back, having her head a little raiſed by the help of a pillow, having the like help to ſupport the reins and buttocks, that her rump may lie high; for if ſhe lie low, ſhe cannot very well be delivered. Then let her keep her knees and thighs as far aſunder as ſhe can, her legs being bowed towards her buttocks, and let her feet be ſtayed againſt a log or ſome other firm thing. And let two women hold her two ſhoulders, that ſhe may ſtrain out the birth with more advantage, holding in her breath, and forcing herſelf as much as poſſible in like manner as when ſhe goes to ſtool: for by ſuch ſtraining, the diaphragm, or midriff, being ſtrongly thruſt downwards, neceſſarily forces down the womb and the child in it. In the mean time, let the midwife encourage her all ſhe can, and take care that ſhe have no rings on her hands when ſhe annoints the part; then let her gently dilate the inward orifice of the womb, and putting her fingers in the entry thereof, ſtretch them from one another when her pains take her, by this means endeavor to help forward the

child, and thrusting by little and little the sides of the orifice towards the hinder part of the child's head, annointing those parts with fresh butter, in case it be necessary. And when the head of the infant is somewhat advanced into the inward orifice, it is usual among midwives to say it is crowned, because it both girds and surrounds it like a crown; but when it is gone so far, and the extremity begins, to appear without the privy parts they say the child is in the passage; and at this time the woman feels herself as if she was scratched or pricked with pins, and is ready to think that the midwife hurts her; whereas in truth it is only occasioned by the violent distention of those parts, which sometimes even suffer a laceration through the bigness of the child's head. When things are come to this posture, let the midwife seat herself conveniently to receive the child, which will now come very quickly; and with her fingers' end which she ought also to be sure to keep pared, let her endeavor to thrust the crowning of the womb bach over the head of the child. And as soon as it is advanced as far as the ears or thereabout, let her take hold of the two sides with her two hands, and wait till the good pain comes, and then quickly draw forth the child, taking care that the navel string be not entangled about the child's neck, or any other part, as sometimes it is, lest thereby the after burden be pulled with violence, and perhaps the womb also, to which it is fastened, so either cause her to flood or else break the string, both of which are of bad consequence to the woman, and render her delivery the more difficult. Great care must be taken that the head be not drawn forth straight, but shake it a little from one side to the other, that the shoulders may the sooner and easier take its place immediately after it is past; which must be done without losing any time lest the head being passed, the child stop there by the largeness of the shoulders, and so be in danger of being suffocated in the passage, as it has sometimes happened for want of care therein. When the head is born she may slide in her fingers under the armpits, and the rest of the body will follow without difficulty, as soon as the midwife hath in this manner drawn forth the child, let her lay it on one side, lest the blood and water which follow too immediately should do it an injury, by running into its mouth and nose, as it would do if it lay on its back, and so endanger the choaking of it. The child being thus drawn forth, the next thing requisite is to bring away the after burden; but before that, let the midwife be very careful to examine whether there be any more children in the womb, for sometimes a woman may have twins; of which the midwife may satisfy herself both by the continuance of the woman's throes and the bigness of her belly. But this is not so certain as to put her hand up the entry of the womb, and there feel whether another child is not presenting to the passage: and if so, she must have a care how she goes about the after birth till the woman be delivered. The first string must be cut and tied with a thread three or four double, and the ends fastened with a string to the woman's thigh to prevent the inconvenience it may cause by hanging between the thighs.

SECTION. VII.

Of the after burden.

Until the after burden is brought away, which ſometimes is more difficult to do than the child, and altogether as dangerous, if it be not ſpeedily done, the woman cannot properly be ſaid to be ſafely delivered, though the child be born.

Therefore as ſoon as the child is born, before the midwife either ties or cuts the navel ſtring leſt the womb ſhould cloſe, let her, having taken the ſtring, wind it once or twice about one or two of the fingers of the left hand, joined together, the better to hold it, with which ſhe may only take ſingle hold of it above the left, near the privities, drawing likewiſe with that very gently, reſting a while, with the fore finger of the ſame hand extending and ſtretching along the ſtring towards the entry of the Veginia, always obſerving, for the more facility, to draw it from the ſide to which the burden leaſt inclines, for in ſo doing the reſt will ſeparate the better. And extraordinary care muſt be taken that it be not drawn forth with too much violence, leſt by breaking the ſtring near the burden, the midwife be obliged to put her whole hand into the womb to deliver the woman; and ſhe had need to take care in this matter, that ſo the womb itſelf, to which ſometimes this burden is faſtened very ſtrongly, be not drawn away with it, which has ſometimes happened. It is therefore neceſſary, to aſſiſt nature with proper remedies, which are in general, whatever has been before mentioned, to cauſe a ſpeedy delivery; for whatever has magnetic virtue to bring away the birth, has the ſame to bring away the after birth. Beſides which, the midwife ought to conſider that the woman cannot but be much ſpent by the fatigue ſhe has already undergone in bringing forth the infant, and therefore ſhould be ſure to take care to give her ſomething to comfort her. To which purpoſe ſome good jelly broths, and a little wine, with a toaſt in it, and other comforting things, will be neceſſary. Sneezing being conducive to bring away the after birth, let her take a little white hellebore in powder to cauſe her to ſneeze. Tanſey and the ſtone Ætitis, applied as before directed, is very efficacious in this. The ſmoke of marygold flowers, received up a woman's privities by a funnel, will bring away the after birth, though the midwife has loſt har hold. Or, if you boil mugwort in water till it be very ſoft, and then take it out and apply it like a poultice to the navel of the woman in travail, conſtantly brings away both the birth and the after birth; but as ſoon as they are come forth, it muſt be inſtantly taken away; leſt it ſhould bring away the womb alſo.

SECTION VIII. *How to cut the child's Navel ſtring.*

After the birth and after birth are ſafely brought away, the midwife ought to take care to cut the Navel ſtring; which, though it be by ſome eſteemed a thing of ſmall matter, yet it requires none of the leaſt skill of a midwife to do it with that care and prudance which it ought, and therefore to inſtruct the induſtrious midwife a little herein: As ſoon as the child is come into the world, let her conſider whether it be weak or ſtrong: if it be weak, let her gently put back part of the vital and nata

ural blood in the body of the child by the navel, for that recruits a weak child, the vital and natural ſpirits being communicated by the mother to the child by its navel ſtring. But if the child be ſtrong there is no need of it. Only it will not be amiſs to let the midwife know, that many children that are born ſeemingly dead, may be brought to life again, if ſhe ſqueeze ſix or ſeven drops of blood out of that part of the navel ſtring which is cut off, and give it to the child inwardly.

As to the cutting it ſhort or long, authors can ſcarce agree about it, nor midwives neither; ſome preſcribe it to be cut at four fingers breadth, which is at the beſt but an uncertain rule, unleſs all fingers were of an equal ſize. 'Tis a received opinion, that the parts adapted to generation are either contracted or dilated, according to the cutting of the navel ſtring, which is the reaſon that midwives are generally ſo kind to their own ſex, that they leave a longer part of the navel ſtring of a male than a female, becauſe they would have the male well provided for the encounters of Venus. And the reaſon they give why they cut thoſe more ſhort is becauſe they believe it makes them modeſt, and their parts narrower, which makes them more acceptable to their husbands. But whether this be ſo or not (which yet ſome of the greateſt ſearchers into the ſecrets of nature affirm for a truth) yet certain it is that great care ought to be uſed about cutting off the navel ſtring: and eſpecially, that after it is cut, it be not ſuffered to touch the ground, for if it be, the child will never be able to hold its water, but be ſubject all its life time to diabetes, as experience often confirms: but as to the manner of cutting the navel ſtring, let the midwife take a brown thread, thee or four times double, of an ell long, or thereabouts, tied with a ſingle knot at each of the ends, to prevent their entangling; and with this thread ſo accommodated (which the midwife ought to have in readineſs before the woman's labor, as alſo a good pair of ſciſſors, that ſo no time may be loſt) let her tie the ſtring within an inch of the belly with a double knot, and turning about the ends of the thread, let her tie two or more on the ſide of the ſtring, reiterating it again, if it be neceſſary; then let her cut off the navel ſtring, another inch below the ligator towards the after birth; ſo that there only remains but two inches of the ſtring, in the midſt of which will be the knot ſpoken of, which muſt be ſo ſtraight knit, as not to ſuffer a drop of blood to ſqueeze out of the veſſels: but yet care muſt be taken not to knit it ſo ſtraight as to cut it in two; and therefore the thread muſt be pretty thick, and pretty ſtraight knit, it being better too ſtraight than too looſe. Some children have miſerably loſt their lives before it hath been diſcovered that the navel ſtring was not well tied. Therefore great care muſt be taken that no blood ſqueeze through for if there do, new knots muſt be made with the reſt of the ſtring. You need not fear to bind the navel ſtring very hard, becauſe it is void of ſenſe; and that part of it which you leave on falls off of its own accord in a few days, ordinarily ſix or ſeven, and ſometimes in leſs time; but it very rarely tarries longer than the eighth or ninth day.

As ſoon as the navel ſtring is cut off, apply a little cotton or lint in the place to keep it warm, leſt the cold enter into the body of the child, which it will unavoidably do, in caſe it be not bound hard enough: and if the lint or cotten you apply to it be dipped in the oil of roſes, it will be better: than having put another ſmall rag, three or four times double, upon the body of the child, above the navel, lay the ſtring ſo wrapped upon it that it may not touch the naked belly. Upon the top of all put another ſmall bolſter; and then ſwathe it in a linen ſwathe, four fingers broad, to keep it ſteady, leſt by rolling too much, or being continually ſtirred from ſide to ſide, it come to fall off before the navel ſtring which you left remaining is fallen off. 'Tis the uſual cuſtom of the midwives to put a piece of burnt rag to it; but I would adviſe them to put a ſmall quantity of bole ammonica, becauſe of its drying quality. Thus much may ſuffice as to cutting the navel ſtring and delivery of a woman in labor, where the labor is natural, and no ill accident happens. But it ſometimes ſo falls out, that the labor is not only hard and difficult, but unnatural alſo, in which the midwife muſt take other meaſures.

CHAP. VII.

What unnatural Labor is, and whence it proceeds: and what the Midwife ought to do in ſuch Caſes.

SECTION I. *What unnatural Labor is.*

IT will be neceſſary to acquaint my readers, that there are three ſorts of bad labor, all painful and difficult, but not all properly unnatural, which are as follows:

The firſt, properly ſtiled hard labor, is that wherein the mother and child do ſuffer very much by extreme pain

The ſecond is difficult labor, different from the former, in that beſides thoſe extreme pains, it is generally attended with ſome unhappy accident, which, by retarding the birth, makes it very difficult: Neither of thoſe, though hard and difficult, can be called unnatural; for woman to bring forth children in pain and ſorrow is natural.

It is therefore the third ſort of labor which I call unnatural; and that is, when the child eſſays to come into the world in a contrary poſition to that which nature ordained. To explain this, the reader muſt know, that there is but one right and natural poſture in which children come to the birth, and that is when the head comes firſt, and the body follows after in a ſtraight line. If inſtead of this, the child comes with its feet foremoſt, or with the ſide acroſs, it is contrary to nature or, to ſpeak more plainly, unnatural.

SECTION II. *Whence hard, difficult and unnatural labor proceeds.*

The true phyſical reaſon why women in general bring forth their children with ſo much pain, is that the ſenſe of feeling being diſtributed to the whole body by the nerves, and the mouth of the womb being ſo ſtraight, that it muſt of neceſſity be dilated at the time of her delivery; the dilating thereof ſtretcheth the nerves, and from thence cometh the pain; ſome women having

more pain in their labor than others, proceeds from their having the mouth of the matrix more full of nerves than others.

Hard and difficult labor may proceed either from the mother or child, or from both : It may proceed from the mother, by reaſon of a general indiſpoſition of her body, or from the indiſpoſition of ſome particular part, and that principally of the womb, which may be effected with ſuch a weakneſs as renders the mother unable to expel her burden. It may be alſo becauſe ſhe is too young or ſhe may be too old, and ſo may have the paſſage too ſtraight, and then, if it be her firſt child, the parts may be too dry and hard, and cannot eaſily be dilated. The cholic does alſo cauſe labor to be hard and difficult, becauſe it hinders the true pain which ſhould accelerate it: for which reaſon, all great and acute pains render a woman's labor very difficult. As when the woman is taken with a violent fever, frequent convulſions, a great flooding, or any other violent diſtemper, eſpecially when the membranes are thick, and the orifice is too ſtraight, or the neck of the womb not ſufficiently opened.

Hard labor may alſo proceed from the child, and this is either when it happens to ſtick to a mole, or is ſo weak that it cannot break the membrane ; alſo, when it is too big either all over, or its head only ; or if the navel veſſels ſhould be twiſted about its neck as when it proves monſtrous, or comes into the birth in an unnatural poſture. Sometimes it proceeds from the ignorance of the midwife, who may hinder nature in her work.

SECT. III. *How the midwife muſt proceed in order to the Delivery of a Woman, in caſe of hard Labor and great extremity.*

In caſe the midwife finds a woman in difficult labor, ſhe muſt endeavor to know the particular obſtruction or cauſe thereof, that ſo ſhe may apply a ſuitable remedy. When hard labor is cauſed by a woman's being too young and ſtraight, the paſſages muſt be anointed with oil, hog's lard, or freſh butter, to relax and dilate them the eaſier. But if a woman be in years and has hard labor from her firſt child, let her lower parts be anointed to molify the inward orifice, which in ſuch caſe (being more hard and callous) does not eaſily yield to the diſtention of labor ; and indeed this is the true cauſe why ſuch women are longer in labor, and why their children in their birth are more ſubject to bruiſes than others. Thoſe who are very lean, and have hard labor from that cauſe, let them moiſten their parts with oil and ointments, to make them ſmooth and ſlippery, that the head of the infant in the womb may not be compreſſed and bruiſed by the hardneſs of the mother's bones in its paſſage. But if the cauſe be weakneſs, ſhe ought to be ſtrengthened, the better to enable her to ſupport her pain. Since difficult labor proceeds from divers cauſes, the midwife muſt make uſe of ſeveral remedies to women in hard, difficult labor, which muſt be adapted to the cauſe from whence it proceeds.

I need not tell the judicious midwife, that in caſe of extremity, when the labor is not only hard, but difficult and dangerous, a far greater care muſt be had than at other times. In ſuch caſes the ſituation of the womb muſt be minded, and accordingly her poſture of lying will be regulated ; which will be beſt acroſs

the bed, being held by thoſe that are of a good ſtrength to prevent her ſlipping down, or moving herſelf during the time of the operation. Then let her thighs be put aſunder as far as may be, and held ſo, while her legs are bent backwards towards her hips, her head leaning upon a bolſter, and the reins of her back ſupported in like manner, her rump and buttocks being lifted up; obſerving to cover her ſtomach, belly, and thighs, with warm linen, as well for decency's ſake as to keep them from the cold.

The woman being in this poſture, let the midwife, or other operator, put up her hand, and try if the neck of the womb be dilated, and then remove the contracted blood that obſtructs the paſſage of the birth, and having greatly made way, let the operator tenderly move the infant, having the hand anointed with ſweet butter, or an harmleſs pomatum, and if the waters are not come down they may be let forth without any difficulty. And if the infant ſhould attempt to break forth not with the head foremoſt or acroſs, he ought gently to turn it, that he may find the feet; which having done, let him draw forth one and having faſtened it to a ribbon, put it up again, and finding the other, bring them as cloſe as may be: let the woman breathe between whiles, aſſiſting nature what ſhe can by ſtraining in bringing forward the birth, that ſo he may the more eaſily draw it forth; and that the operator may do it the better, and his hold may be the ſurer, he muſt faſten or wrap a linen cloth about the child's thighs, obſerving to bring it into the world with its feet downwards.

But in caſe there be a flux of blood, let the operator be well ſatisfied whether the child or the ſecundine come firſt; for ſometimes when the ſecundine has come firſt, the mouth of the womb has been thereby ſtopped, and the birth hindered, to the hazard both of the woman and child; and therefore, in this caſe the ſecundine muſt be removed by a ſwift turn, and the child ſought for, and drawn forth, as has been directed.

If upon enquiry, it appears that the ſecundine comes firſt, let the woman be delivered with all convenient ſpeed, becauſe a great flux of blood will follow; for then the veins are opened. And on this account two things are to be minded: firſt, whether the ſecundine advances forward much or little; if the former, and the head of the child firſt appears, it muſt be directed to the neck of the womb, as in the caſe of natural births; but if there appears any difficulty in the delivery, the beſt way is to ſearch for the feet, and by them it may be put by with a gentle hand, and the child taken out firſt: but if the ſecundine is advanced, ſo that it cannot be put back, and the child follow it cloſe, then the ſecundine is to be taken out firſt with much care, and as ſwift as may be, and laid aſide, without cutting the entrail that is faſtened to them; for by that you may be guided to the infant, which whether it be alive or dead, muſt be drawn forth by the feet as ſoon as poſſible; though this is not to be done but in caſe of great neceſſity, for the order of nature is for the ſecundine to come laſt.

SECTION IV. *Of the delivery of a dead Child.*

In delivering a woman of a dead child, the operator ought to be certain the child is dead, which might be known by the falling of the mother's breafts, the coolneſs of her belly, the thickneſs of her urine, which is attended with ſtinking ſediment at bottom; and no motion to be perceived in the child: Alſo, when ſhe turns herſelf in her bed, the child ſways like a lump of lead, and her breath ſtinks, though not uſed to do ſo. When the operator is certain that the child is dead, let him or her apply themſelves to the ſaving of the mother, by giving her thoſe things that are moſt powerful in ſerving nature in her operations. But, if through weakneſs, the womb is not able to cooperate with nature, ſo that a manual operation is abſoluteiy neceſſary, let the operator carefully obſerve the following directions, viz. If the child be found dead with his head foremoſt, he muſt take notice that the delivery will be the more difficult, becauſe in this caſe it is only impoſſible that the child ſhould any ways aſſiſt in its delivery, but the ſtrength of the mother does alſo very much fail her, wherefore the moſt ſure and ſafe way for him to put up his left hand, ſliding it, as hollow in the palm as he can, into the neck of the womb, into the lower part thereof towards the feet, and then between the infant and the neck of the matrix; and having a hook in the right hand, couch it cloſe and ſlip it above the left hand between the head of the child and the flat of the hand, fixing it to the bone of the temple towards the eye; or, for want of convenient coming at that, obſerve to keep the left hand in its place, gently moving and ſtirring the head with it, and ſo with the right hand hook draw the child forward, encouraging the woman to put forth her utmoſt ſtrength, and always drawing when the woman's pangs are upon her. The head being thus drawn forth the operator muſt, with all ſpeed, ſlip his hand under the arm holes of the child, and take it quite forth, giving immediately to the woman a toaſt of fine wheaten bread in a quarter of a pint of tent, to revive and cheriſh her ſpirits. By what I have already ſhewn, the midwife will know what to do in any other caſe that may fall out, remembering, that for a child to come head foremoſt, and the body to follow in a ſtraight line, is the right poſture for a child when it comes to the birth; and if it comes any other way, it will be the wiſdom of the midwife, if poſſible to bring it to this poſture; but if that cannot be done without very great danger, then put it in a poſture that it may be brought forth by the feet. And the midwife perceiving in what poſture the child preſents, or that the woman floods, or any other accident happens, by which ſhe finds it not in her power to deliver it, it will be beſt for her to ſend for a man midwife in time, rather than put things to the utmoſt extremity.

CHAP. VIII.

SECTION I. *Directions for child bed Women after delivery.*

AFTER the birth and after birth are brought away if the woman's body be very weak, keep her not too hot, the extremity of heat weakens nature, and diſſolves the ſtrength: but whether ſhe be weak or ſtrong, let no cold come near her,

for cold is an enemy to the ſpermatic parts: and if cold gets into the womb it increaſes the after pains, cauſes ſwellings in the womb, and hurts the nerves. Therefore if a woman has had very hard labor, 'tis proper, after delivery, to wrap her in the skin of a ſheep, taken as warm as poſſible, and putting the fleſhy ſide to her reins and belly: if a ſheep's skin cannot well be had, the skin of a hare or rabbit, taken off as ſoon as it is killed may be applied to the ſame parts, and by ſo doing the dilation made in the birth will be cloſed up, and the melancholy blood expelled from thoſe parts; and theſe may be continued during the ſpace of an hour or two. After which let the woman be ſwathed with a fine linen cloth, about a quarter of a yard in length, chafing the belly, before it be ſwathed with the oil of St. John's wort: afterwards raiſe up the matrix with a linen cloth, many times folded, then with a little pillow or quilt cover her flank, place the ſwathe ſomewhat above the haunches, winding it indifferently ſtiff, applying at the ſame time, a warm cloth to the nipples. Care ſhould be taken not to apply any remedy to keep back the milk, becauſe thoſe remedies which drive back the milk being of a diſſolving nature, it is improper to apply them to the breaſt during ſuch a diſorder, leſt evil humors ſhould be contracted in the breaſt thereby: and therefore twelve hours at leaſt ought to be allowed for the circulation and ſettlement of the blood.

After the woman has been delivered ſome time, you may make a reſtrictive of the yolk of two eggs, a quarter of a pint of white wine, oil of St. John's wort, oil of roſes, plantain, and roſe water of each an ounce, mix them together, fold a linen cloth and dip therein, warm it before a gentle fire, apply it to the breaſts, and the pain of theſe parts will be greatly eaſed.

But be ſure not to let her ſleep ſoon after her delivery, but let her take ſome broth, or caudle, or any other liquid matter that is nouriſhing, about four hours after her delivery, and then ſhe may be ſafely permitted to ſleep, if ſhe is diſpoſed, as it is probable ſhe will be, being tired with the fatigue of her labor. But before this, as ſoon as ſhe is laid in her bed let her drink a draught of burnt white wine in which melt a dram of ſpermatic. Let her alſo avoid the light for the firſt three days for labor weakens the eye ſight. The herb vervain is of ſingular ſervice to the ſight, and may be uſed any way, either boiled in meats, or drink, not having the leaſt offenſive taſte, but many pleaſant virtues. If ſhe ſhould be feveriſh, add the leaves or roots of plantain to it; but if her courſes come not away as they ought, let the plantain alone, and inſtead thereof put mother of thyme. If the womb is foul, which may be known by the impurity of the blood, and its ſtinking and coming away in clotted lumps; or if you ſuſpect any of the after birth to be left behind, which may ſometimes happen, though the midwife be ever ſo careful and skilful, then make her a drink of feverfew, penneroyal, mother of thyme, boiled in white wine, and ſweetened with ſugar: panada and new laid eggs are the beſt meat for her at firſt; of which let her eat often, and but a little at a time. Let her uſe cinnamon in all her meats and drinks,

for it mightily ſtrengthens the womb ; let her ſtir very little for ſix or ſeven days after her delivery ; and talk little, for that weakens her. If ſhe goes not to ſtool, give a clyſter made with the decoction of mallows, and a little brown ſugar. After ſhe has lain in a week, or more, give her ſuch things as cloſe the womb ; to which you may add a little polypodium, both leaves and roots bruiſed, which will purge gently : This is as much in caſe of natural birth as needs at firſt be done.

SECTION II.

In extremity of unnatural labor.

Let the woman be ſure to keep a temperate diet ; and take care that ſhe does by no means overcharge herſelf, after ſuch an exceſſive evacuation, not being ruled by or giving credit to unſkilful nurſes, who are apt to admoniſh them to feed heartily, the better to repair the loſs of blood : for the blood is not for the moſt part pure, but ſuch as has been detained in the veſſels or membranes, and it is better voided for the health of a woman than kept, unleſs there happens an extraordinary flux of blood ; for if her nouriſhment be too much, it may make her liable to a fever, and increaſe the milk to a ſuperfluity which may be of dangerous conſequence. It is therefore requiſite for the firſt five days eſpecially, that ſhe take moderately panada, broth, poached eggs, jelly of chickens and calves feet, French barley broth, each ſomewhat increaſing the quantity. And, if ſhe intend to be nurſe to her child ſhe may take a little more than ordinary to increaſe the milk by degrees ; which muſt be of no cotinuance, but drawn off either by the child or otherwiſe. In that caſe likewiſe, let her have coriander or fennel ſeed boiled in barley broth : and by that means, for the time before mentioned let her abſtain from meat. If no fever trouble her, ſhe may drink now and then a ſmall quantity of white wine or claret, as alſo a ſyrup of maiden hair, or any other ſyrup that is of an aſtringent quality, taking it in a little water well boiled. And after the fear of a fever, or contraction of humors to the breaſt is over, ſhe may then be nouriſhed more plentifully with the broth of pullets, capons, pigeons, partridges, mutton, veal, &c. which muſt not be till after eight days at leaſt from the time of the delivery ; for by that time the womb will have purged itſelf, unleſs ſome intervening accident ſhould hinder. It will then be expedient to give her cool meats, ſo it be done ſparingly, the better to gather ſtrength ; and let her during the time reſt quietly, and free from diſturbance, not ſleeping in the day time, if ſhe can avoid it. If there happens any obſtructions in the evacuation of excrements, the following clyſters may be adminiſtered : Take pellitory of the wall, and of both the mallows, of each a handful ; fennel and anniſeed of each two ounces ; boil them in the decoction of a ſheep's head, and take of this three quarters, diſſolving it in common honey and coarſe ſugar, and of new freſh butter two ounces ; ſtrain it well, and adminiſter it clyſter wiſe. But if this does not operate your mind, then you may take one ounce of catholicon.

CHAP. IX.

Of a mole or false conception: and of Monsters and Monstrous Births, with the reason thereof.

SECTION I.

Of a Mole, or false conception.

A MOLE or false conception, is nothing else but a mass or great lump of flesh burdening the womb. It is an inarticulate piece of flesh without any form, and therefore differs from monsters, which are *formata* and *articulata*; and then it is said to be a conception, but a false one which puts a difference between a true conception and a mole; and the difference holds good three different ways: First in the genius, because a mole connot be said to be animal. Secondly, it differs in species, because it hath no human figure, and bears not the character of a man. Thirdly, it differs in the individium for it hath no affinity with the parts of that in the whole body, or any particles of the same. There are variety of judgments among authors about the producing cause of this effect, some affirming that it is produced by the woman's seed going into the womb without the man's: but because we have before proved that women have properly no seed at all, but only an ovalium, which is fœcundated by the active principle of the man's seed, this opinion needs no confutation. Others say, it is engendered of the menstruous blood: but were this granted, it would follow that maids by having their courses stopped might be subject to the same, which never any yet were. The true cause of this carnous conception which we call a mole proceeds both from the man and the woman, from corrupt and barren seed in the man, and from the menstruous blood in the woman, both mixed together in the cavity of the womb; and nature finding herself weak (yet desirous of maintaining the perpetuity of her species) labors to bring forth a vicious conception rather than none: and not being able to bring forth a living creature generates a piece of flesh.

This imperfect conception may be known to be such by the following signs. The monthly courses are suppressed the belly is puffed up, and waxeth hard, the breath smells, and the appetite is depraved. But you will say these are signs of a breeding woman in true conception, and therefore these cannot distinguish a mole. To this I answer, though thus they agree, yet they are different in several respects; for a mole may be felt in the womb before the third month, which an infant cannot; the motion of the mole being only caused by the faculty of the womb, and of the seminal spirit diffused through its substance; for though it has no animal, yet it has a vegetative life; and then the belly is suddenly swelled where there is a mole; but in conception the belly is first contracted, and then riseth gradually. Another difference is, the belly being pressed with the hand the mole gives way, and the hand being taken away, it returns to the place again; but a child in the womb though pressed with the hand, moves not presently, and being removed returns not at all, or at least very slowly. But, to name no more, another material difference is, that a child continues not in the womb above eleven months at most; but a mole sometimes con-

tinues four or five years, ſometimes more or leſs, according to its being faſtened to the matrix; for ſometimes the mole hath fallen away in four or five months; and if it remains until the 11th month, the legs are feeble, and the whole body appears in a waſting condition, or the belly ſwells bigger and bigger, which is the reaſon that ſome who are thus afflicted, think they are hydropical, though it be no ſuch thing; which a woman eaſily knows, if ſhe will but conſider that in a dropſy the legs will ſwell and grow big; in caſe of a mole they conſume and wither. This diſtemper is an enemy to true conception, and of dangerous conſequence: for a woman that breeds a mole is every way more inconvenienced than a woman that is with child, and all the while ſhe keeps it, ſhe lives in danger of her life.

The cure of this diſtemper conſiſts chiefly in expelling it as ſoon as may be; for the longer it is kept the worſe it is: and this many times cannot be effected without manual operation; but that being the laſt remedy, all other means ought to be firſt uſed. Amongſt which, phlebotomy ought not to be omitted; for ſeeing letting of blood cauſeth abortion, by reaſon it takes away that nouriſhment that ſhould ſuſtain the life of the child, why may not this vicious conception be by the ſame means deprived of that vegetative ſap by which it lives? to which end open the liver vein, and the ſaphana in both feet; faſten cupping glaſſes to the loins and ſides of the belly; which done, let the urinary part be firſt mollified, and the expulſive faculty be provoked to expel the burden. And to looſen the ligatures of the mole, take mallows, with roots, three handfuls, pellitory, camomile, violet leaves, melilot, roots of fennel, parſley mercury of each two handfuls; fenugreek and linſeed, of each one pound boil them in water, and make a bath thereof, and let her ſit therein up to her navel. After her going out of the bath, let her reins and privities be anointed with this unguent: Take ammoniati, landani, freſh butter, of each an ounce; and with oil of linſeed make an ointment; or, inſtead of this may be uſed unguentum agrippæ or dialthæ. Alſo take aq. bryonæ compoſito roots of althæ and mercury, of each a handful; linſeed and barley meal, of each ſix ounces; boil all theſe with water and honey, and make a plaiſter, and the ligaments of the mole being thus looſened, let the expulſive faculty be ſtirred up to expel the mole; for the effecting of which, all thoſe medicaments are very proper which bring down the courſes. Therefore take ſavine, madder, valerian, horehound, ſage, hyſſop, botony, pennyroyal, calamint, hypericon, and with water make a decoction, and give three ounces of it, with an ounce and a half of ſyrup of feverfew. But if theſe remedies prove not available, then muſt the mole be drawn away by manual operation, in the manner following: let the operator (having placed the woman in a proper poſture, as has been directed in caſes of unnatural labor) ſlide his hand into the womb, and with it draw forth the mole; but if it be grown ſo big that it cannot be drawn away whole (which is very rare, becauſe it is a ſoft tender body, and much more pliable than a child) let the operator bring it away by parts, uſing a crotchet or knife, if it cannot be done

otherwiſe. And if the operator finds it is joined and faſtened to the womb, he muſt gently ſeparate it with his fingers ends, his nails being paired, putting them by little and little between the mole and the womb, beginning on the ſide where it does ſtick faſt, and ſo purſue it till it be quite looſened, taking great care if it grows too faſt not to rend or hurt the proper ſubſtance of the womb, proceeding as in caſe of an after burden that ſtays behind in the womb when the ſtring is broken off: but a mole has never any ſtring faſtened to it, or any burden whence it ſhould receive any nouriſhment, but does of itſelf immediately draw it from the veſſels of the womb. And thus much ſhall ſuffice to be ſaid concerning a mole; of which I have ſhewn the cauſe, the ſigns, and the cure.

SECTION II.

Of Monſters, and monſtrous Births.

Monſters are properly depraved conceptions, and are deemed by the ancients to be excurſions of nature, and are always vicious either by figure, ſituation, magnitude, or number.

They are vicious in figure, when a man bears the character of a beaſt: Vicious in magnitude, when the parts are not equal or one part is bigger than another; and this is a thing very common, by reaſon of ſome excrellence. They are vicious in ſituation many ways; as if the ears were on the face, or the eyes on the breaſts, or on the legs, as were ſeen in a monſter born at Ravenna, in Italy, in the year 1570. And laſtly vicious in number, when a man hath two heads, four hands and two bodies joined, which was the caſe of the monſter born at Zazara in the year 1550.

As to the cauſe of their generation, it is either divine or natural. The divine cauſe proceeds from the premiſſive will of the great Author of our being, ſuffering parents to bring forth ſuch deformed monſters, as a puniſhment for their filthy and corrupt affection, let looſe unto wickedneſs, like brute beaſts that have no underſtanding: for which reaſon the ancient Romans enacted, that thoſe who were deformed ſhould not be put into religious houſes. And St. Jerome, in his time grieved to ſee the deformed and lame offered up to God in religious houſes; and Kecherman, by way of inference, excluded all that were miſhapen, becauſe outward deformity of body is often a ſign of the pollution of the heart, as a curſe laid upon the child for the incontinency of the parents. Let us therefore ſearch out the natural cauſe of their generation, which according to thoſe who have dived into the ſecrets of nature, is either in the matter or the agent, in the ſeed or in the womb. The matter may be in fault two ways, by defect or acceſs. By defect, when the child hath but one arm or leg, &c. by acceſs, when it has three hands or two heads. Some monſters are alſo begotten by women's beſtial and unnatural coition, &c. The agent or womb may be in fault three ways: firſt, in the forming faculty, which may be too ſtrong or too weak, which ſometimes produces a depraved figure. 2dly. The evil diſpoſition of the inſtruments or place of conception, will cauſe a monſtrous birth. And thirdly, the imaginative power at the time of

conception, is of ſuch a force as to ſtamp a character of the thing imagined upon the child; thus a woman at the time of conception, beholding the picture of a Blackamoor, conceived and brought forth a child reſembling an Ethiopian; and by this the children of an adultreſs, though begotten by another man, may have the neareſt reſemblance to her own huſband. This power of imagination was well enough known to the ancients as is evident by the example of Jacob, the father of the twelve tribes of Iſrael, who having agreed with his father in law to have all the ſpotted ſheep for the keeping of his flock to increaſe his wages, took hazel rods peeling them with white ſtreaks in them and laid them before the ſheep when they came to drink, and they coupling together whilſt they beheld the rods, conceived and brought forth ſpotted young. Nor does the imagination work in the child at the time of conception only, but afterwards alſo; as was ſeen in the example of a worthy gentlewoman, who being big with child, and paſſing by a butcher killing meat, a drop of blood ſpirted on her face; whereupon ſhe then ſaid that the child would have ſome blemiſh on his face, which proved true, for at the birth it was found marked with a red ſpot.

But beſides the way already mentioned, Monſters are ſometimes produced by other means, to wit, by the undue coition of a man and his wife when her monthly flowings are upon her; which being a thing againſt nature, no wonder that it ſhould produce an unnatural iſſue. If therefore a man's deſire be ever ſo great for coition (as ſometimes it is after long abſence) yet if a woman knows that the cuſtom of women is upon her, ſhe ought not to admit of any embraces, which are at that time both unclean and unnatural The iſſue of theſe uclean embraces proving often monſtrous, as a juſt puniſhment for ſuch a turpidinous action. Or, if they ſhould not always produce monſtrous births yet are the children thus begotten, for the moſt part dull, heavy, ſluggiſh, and defective in underſtanding, wanting the vivacity and livelineſs which thoſe children are endued with who are begotten when women are free from their courſes.

There has been ſome contending amongſt authors, whether thoſe who are born monſters have reaſonable ſouls, the reſult of both ſides, at laſt coming to this, that thoſe who, according to the order of nature, are deſcended from our firſt parents by the coition of man and woman, tho' their outward ſhape be deformed and monſtrous, have notwithſtanding reaſonable ſouls: but theſe monſters that are not begotten by man, but are the product of a woman's unnatural luſt, copulating with other creatures, ſhall periſh as the brute beaſts by whom they were begotten, not having a reaſonable ſoul. The ſame being alſo true of imperfect and abortive births.

Some are of opinion, that monſters may be engendered by infernal ſpirits; but notwithſtanding Ægidius Facius pretended to believe it with reſpect to a deformed monſter, born at Cracovia, and Hieronimus Carcomus writeth of a maid that was got with child by the devil; yet, as a wicked ſpirit is not capable of having human ſeed, how is it poſſible he ſhould beget a human creature? If they ſay, that the devil may aſſume to himſelf a

dead body and enliven the faculties of it, and thereby make it able to generate, I anſwer, that though we ſuppoſe this could be done, (which I believe not) yet that body muſt bear the image of the devil: and it borders on blaſphemy, to think that the all wiſe and good being would ſo far give way to the worſt of ſpirits as to ſuffer him to raiſe up his diabolical offspring: for in the ſchool of nature, we are taught the contrary viz. that like begets like; whence it follows, that a man cannot be born of a devil. The firſt I ſhall preſent is a moſt frightful monſter indeed, repreſenting an hairy child. It was covered over with hair like a beaſt. That which rendered it yet more frightful was that its navel was in the place where his noſe ſhould ſtand, and his eyes placed where his mouth ſhould have been, and its mouth was in the chin. It was of the male kind and born in France, in the year 1597.

A boy was born in Germany, with one head and one body, but having four ears, four arms, four thighs, four legs and four feet.

This birth the learned, who beheld it, judged to proceed from the redundance of the ſeed; but there not being enough for twins, nature formed what ſhe could, and ſo made the moſt of it.

This child lived ſome years, and though he had four feet, he knew not how to go; by which we may ſee the wiſdom of nature or rather the God of nature, in the formation of the body of man.

Heav'n in our firſt formation did provide,
Two arms and legs; but what we have beſide
Renders us monſters, and miſhapen too,
Nor have we any work for them to do,

Two arms, two legs, are all that we can uſe.
And to have more there's no wiſe man would chooſe.

In the time of Henry III. a woman was delivered of a child, having two heads and four arms, and the reſt was a twin under the navel; and then beneath, all the reſt was ſingle, as appears in the figure. The heads were ſo placed that they looked contrary ways, and each had two diſtinct arms and hands. They would both laugh, ſpeak, cry, and both eat and be hungry together. Sometimes the one would ſpeak, and the other would keep ſilence, and ſometimes both would ſpeak together. It was of the female ſex; and though it had two mouths and did eat with both, yet there was but one fundament to disburden nature. It lived ſeveral years, but one outlived the other three years, carrying the dead one (for there was no parting them) till the other fainted with the burden, and more with the ſtink of the dead carcaſe.

A child was born in Flanders which had two heads and four arms ſeeming like two girls joined together, having two of their arms lifted up between and above their heads: the thighs being placed as it were acroſs one another according to the figure. How long they lived I had no account of.

Nature to us ſometimes does Monſters ſhew
That we by them may our own mercies know;
And thereby ſin's deformity may ſee
Than which there's nothing can more monſtrous be.

ARISTOTLE's MASTER PIECE.

PART III.

DISPLAYING THE SECRETS OF NATURE RELATING TO PHYSIOGNOMY.

CHAP. I. SECTION I.

Of Phyſiognomy, ſhewing what it is, and from whence it is derived.

PHYSIOGNOMY is an ingenious ſcience, or knowledge of nature, by which the inclination and diſpoſitions of every creature are underſtood: and becauſe ſome of the members are uncompounded and entire of themſelves, as the tongue, the heart, &c. and ſome of a mixed nature, as the eyes, the noſe, and others, we therefore ſay, that there are many ſigns which agree and live together, which inform a wiſe man how to make his judgment, before he be too raſh to deliver it to the world. Nor is it to be eſteemed a fooliſh or idle art, ſeeing it is derived from the ſuperior bodies; for there is no part of the face of a man, but what is under the peculiar influence or government, not only of the ſeven planets, but alſo of the twelve ſigns of the zodiac; and the diſpoſition, vices, virtues, and fatality, either of a man or woman, are plainly foretold, if the perſon pretending to the knowledge thereof be an artiſt, which, that my readers may attain to, I ſhall ſet theſe things in a clear light.

The reader ſhould remember that the forehead is governed by Mars; the right eye is under the dominion of Sol; the left is ruled by Luna or the Moon; the right ear is the care of Jupiter; the left of Saturn; the rule of the noſe is claimed by Venus, which by the way, is one reaſon that, in all unlawful veneral encounters, the noſe is too ſubject to bare the ſcars which are gotten in thoſe wars: and the nimble Mercury, the ſignification of eloquence, claims the dominions of the mouth, and that very juſtly.

Thus have the ſeven planets divided the face among them but not ſo abſolutely, but that the twelve ſigns of the zodiac do alſo come in for a part: And therefore the ſign Cancer preſides in the uppermoſt part of the forehead; Leo attends upon the right eye brow, as Sagitarius does upon the right eye, and Libra upon the right ear; upon the left eye and eye brow Aquarius and Gemini, and Aries the left ear; Taurus rules in the middle of the forehead, and Capricorn the chin: Scorpio takes upon him the protection of the noſe; Virgo claims the precedence of the right cheek, and Piſces of the left. And thus the face of man is cantoned out among the Signs and Planets; which being carefully attended to, will ſufficiently inform the artiſts how to paſs a judgment; For, according to the Sign or Planet ruling, ſo alſo is the judgment to be of the part ruled, which all thoſe that have underſtanding know eaſily how to apply.

In the judgment that is to be made from phyſiognomy, there is a great difference betwixt a man and a woman, becauſe, in reſpect of the whole compoſition, men more fully comprehend it than women do, as will appear in the following ſection: Therefore the judgments we paſs properly concern a man, as comprehending the whole ſpecies, and but improperly the woman, as a part thereof, and derived from the man; and therefore in the judgment about the lines and marks of a face, reſpect ſhould be had to the ſex; for when we behold a man whoſe face is like unto a woman's; or the face of a woman, who in reſpect of her fleſh and blood is like unto a man, the ſame judgment is not paſſed on her, as on a man that is like unto her, in regard that the complexion of the woman is much different from that of a man, even in thoſe reſpects, which are ſaid to be common; therefore reſpect ſhould be had to other parts of the body, as the hands, &c. Now in theſe common reſpects, two parts are attributed to a man, and a third part to a woman.

Wherefore, it being our intention to give you an exact account according to the rule of phyſiognomy, of all and every part of the members of the body, we will begin with the head, as it hath relation only to a man and a woman, and not any other creature that the work may be more obvious to every reader.

CHAP. II.

Of the Judgments of Phyſiognomy.

HAIR that hangs down without curling, if it be of a fair complexion thin and ſoft, ſignifies a man to be naturally faint hearted, and of a weak body, but of a quiet and harmleſs diſpoſition. Hair that is big and thick and ſhort denotes a man to be of a ſtrong conſtitution, bold, ſecret, deceitful, and for the moſt part, unquiet, and vain, luſting after beauty, and more fooliſh than wiſe, though fortune may favor him. He whoſe hair is partly curled and partly hanging down, is commonly a wiſe man or a very great fool, or elſe a knave. He whoſe hair groweth thick on his temples and his brow, one may at firſt ſight certainly conclude that ſuch a man is by nature ſimple, vain, luxurious, luſtful, credulous, clownish in his ſpeech and converſation, and dull in apprehenſion. He whoſe hair not only curls very much, but buſheth out, and ſtands on end, if the hair be white, or yellowiſh, he is by nature proud and bold, dull of apprehenſion, ſoon angry, a lover of venery, given to lying, malicious, and ready to do any miſchief. He whoſe hair riſes in the corner of his temples, and is alſo groſs and rough, is a man highly conceited of himſelf, inclined to malice, but cunningly conceals it, is very courtly, and a lover of new faſhions. He who hath much hair, that is, whoſe hair is thick all over his head, naturally vain and very luxurious, of a good digeſtion, eaſy of belief and ſlow of performance, of a weak memory, and for the moſt part unfortunate. He whoſe hair is of a reddiſh complexion, is, for the moſt part, if not always, proud, deceitful, detracting, venerous, and full of envy. He whoſe hair is extraordinary fair, is for the moſt part, a man fit for all praiſe worthy enterprizes, a lover of honor and much more inclined to

do good than evil; laborious and careful to perform whatever is committed to his care; secret in carrying on any business, and fortunate. Hair of a yellowish color shews a man to be good conditioned, and willing to do any thing, fearful, shamefaced, and weak of body, but strong in the abilities of the mind, and more apt to remember than revenge an injury. He whose hair is of a brownish color, and curleth a little, is a well disposed man, inclined to that which is good, a lover of peace, cleanliness and good manners. He whose hair turns gray or hoary in the time of his youth, is generally given to women, vain, false, unstable and talkative.

NOTE, That whatsoever signification the hair has in men, it hath the same in women also.

Thus does wise Nature make our very hair
Shew all the passions that within us are;
If to the bottle we are most inclin'd,
Or, if we fancy most the female kind;
If into virtue's paths our minds we bend,
Or, if to vicious ways our footsteps tend,
A skilful artist can unfold the same,
And from our hair a certain judgment frame:
But since our peri-wigs are come in fashion,
No room is left for such an observation

The forehead that riseth in a round, signifies a man liberally merry, of good understanding, and generally inclined to virtue. He whose forehead is fleshy, and the bone of the brow jutting out, and without wrinkles, is a man inclined to suits of law, contentious, vain, deceitful, and addicted to follow ill courses. He whose forehead is very low and little, is of good understanding, magnanimous, but extremely bold and confident, and a great pretender to love and honor. He whose forehead seems sharp, and pointing up in the corners of his temples, so that the bone seems to jut forth a little, is a man naturally weak and fickle, and weak in his intellectuals. He whose brow upon the temple is full of flesh is a man of a great spirit, proud, watchful, and of gross understanding. He whose brow is full of wrinkles, and hath as it were a seam coming down in the middle of the forehead, is one that is of a great spirit, a great wit, void of deceit, and yet of hard fortune. He who has a full large forehead, and a little round, destitute of hair, or at least that has little on it, is bold, malicious, high spirited, full of choler, and apt to transgress beyond all bounds and yet of a good wit. He whose forehead is long and high, jetting forth, and whose face is figured almost sharp and picked towards the chin, is one reasonably honest, but weak and simple, and of hard fortune,

Who view men well may on their vices hit,
For some men's crimes are on their foreheads writ;
But the resolved man outbraves his fate,
And will be good although unfortunate.

The eye brows that are much arched whether in man or woman, and which, by frequent motion, elevate themselves, shew the person to be proud, high spirited, vain glorious, bold and threatening, a lover of beauty, and indifferently inclined to either

good or evil. He whoſe eyelids bend downward when he ſpeaks to another man, or looks upon him, and who has a kind of ſkulking look, is by nature a penurious wretch, cloſe in all his actions, of few words, but full of malice. He whoſe brows are thick, and have but a little hair upon them, is weak and credulous, very ſincere, ſociable, and deſirous of good company. He whoſe eye brows are folded, and the hair thick, and bending downwards, is one that is clowniſh, heavy, ſuſpicious, miſerable, envious, and will cheat and cozen you if he can. He whoſe eye brow hath but ſhort hair, and of whitiſh color, is fearful, eaſy of belief, and apt to undertake any thing. Thoſe whoſe eye brows are black, and the hair of them thin, will do nothing without great conſideration, is bold and confident of the performance of what he undertakes, and is not apt to believe any thing without reaſon for ſo doing.

Thus by the eye brows women's minds we know,
Whether they're white or black, or quick or ſlow:
And whether they'll be curſed or be kind,
By looking in their eye brows we may find.

If the ſpace between the eye brows be of more than ordinary diſtance, it ſhews the perſon to be hard hearted, envious, cloſe and cunning, apprehenſive, greedy of novelties, addicted to cruelties more than love. But thoſe men whoſe eye brows are at a leſſer diſtance, are for the moſt part of a dull underſtanding, yet ſubtle enough in their dealings and of an uncommon boldneſs, which is often attended with great felicity; but above all, they are moſt ſure and conſtant in their friendſhip.

Great and full eyes either in men or women, ſhew the perſon to be for the moſt part ſlothful, bold, envious, a bad concealer of ſecrets, miſerable, vain, given to lying, and yet of a bad memory, ſlow in invention, weak in his intellectuals, and yet very conceited of his abilities. He whoſe eyes are hollow in his head and therefore diſcerns excellently well at a great diſtance, is one that is ſuſpicious, malicious, furious, perverſe in his converſation, of an extraordinary memory, bold cruel and falſe, both in words and deeds, proud, threatening, vicious, envious, treacherous: But he whoſe eyes are as it were ſtarting out of his head is a ſimple fooliſh perſon, ſhameleſs, very ſervile, and eaſy to be perſuaded either to vice or virtue. He who looks ſtudiouſly with his eyes downwards, is of a malicious nature, very treacherous, unfaithful, envious, miſerable, impious towards God, and diſhoneſt towards men. He whoſe eyes are ſmall, and conveniently round, is baſhful and weak, very credulous, liberal to others, and even in his converſation. He whoſe eyes look on a ſquint, is deceitful, unjuſt, envious, furious, a great liar, and as the effect of all this, miſerable. A wandering eye rolling up and down, denotes a vain, ſimple man, luſtful treacherous. He of ſhe whoſe eyes are twinkling, and which move forward or backward ſhew the perſon to be luxurious, unfaithful, preſumptuous, treacherous, and hard to believe any thing that is ſpoken. If a perſon has any greenneſs mingled in the white of his eyes, ſuch is commonly ſilly and often very falſe and deceitful unkind to his friends, a great concealer of his own ſecrets, and very choleric.

Thoſe whoſe eyes roll up and down, or thoſe who ſeldom move their eyes, but when they do, draw them inwardly, and faſten them upon ſome object, ſuch are by their inclinations very malicious, vain glorious, ſlothful, unfaithful, envious, falſe and contentious. They whoſe eyes are addicted to blood ſhot, are naturally choleric, proud, diſdainful, cruel, ſhameful, perfidious, and much inclined to ſuperſtition. They who have eyes like oxen are perſons of good nutriment, but of a weak memory, dull underſtanding, and ſilly in their converſation: But they whoſe eyes are neither too little nor too big, and inclined to a black, do ſignify a man mild, peacable, honeſt, witty, and of good underſtanding: and one that, when need requires is ſerviceable to his friends

Thus from the eyes we ſev'ral things may ſee,
By nature's art of phyſiognomy,
That no man ſcarce can make a look awry.
But we thereby ſome ſecret ſymptoms may
Diſcern of his intention, and foreſee
Unto which paths his ſteps directed be;
And this may teach us, goodneſs more to prize,
For where one's good, there's twenty otherwiſe.

A long and thin noſe denotes a man bold, curious, angry weak and credulous: eaſy to be perſuaded either to good or evil A long noſe and extended, its tip bending downwards ſhews the perſon to be wiſe, diſcreet, officious, honeſt, and faithful, and who will not eaſily be overreached. A bottle noſe denotes a man to be impetuous in the obtaining his deſires, vain, falſe luxurious, weak, credulous. A noſe broader in the middle and leſs towards the end, denotes a vain talkative perſon, a liar and one of hard fortune. He who hath a long and great noſe, is an admirer of the fair ſex, well accompliſhed for the wars of Venus, but ignorant of any thing that is good; aſſiduous in obtaining what he deſires; and though very ignorant, would fain be thought very knowing. A noſe ſharp on the tip of it, and neither too long nor too ſhort, too thick nor too thin, denotes the perſon, if a man, to be of a fretful diſpoſition, always pining and peeviſh; and if a woman, a ſcold, contentious, wedded to her own humor; and if married, a plague to her husband. A noſe very round at the end of it, and having but little noſtrils, ſhews the perſon to be munificent and liberal, true to his truſt, but credulous, proud, and vain. A noſe very long and thin at the end of it, and ſometimes round, ſignifies one bold in his diſcourſe, honeſt in his dealings, patient in receiving, and ſlow in offering injuries, but yet privately malicious. He whoſe noſe is naturally more red than any other part of his face is denoted to be covetous, luxurious, and an enemy to goodneſs. A noſe that turns up again and is long and full on the tip of it, ſhews the perſon to be bold, covetous, envious, a liar, and deceiver, vain glorious, contentious, and unfortunate. He whoſe noſe riſeth high in the middle, is prudent, politic, courageous, honorable in his actions and true to his word. A noſe big at the end ſhews a perſon to be of a peaceful diſpoſition, induſtrious, faithful, and of a good underſtanding. A very wide noſe with wide noſtrils, denotes a man

full of apprehenſion, and inclined more to ſimplicity than wiſdom, and withal contentious, vain glorious, and a liar.

Thus from the noſe our phyſiognomiſt
Can ſmell men's inclinations if we liſt;
And from its color and its make,
Of vice and virtue a ſurvey can take.

When the noſtrils are cloſe and thin, they denote a man to have but little teſticles, and to be very deſirous of the enjoyment of women, but modeſt in his converſation. But he whoſe noſtrils are great and wide is uſually well hung, and luſtful; but of an envious, bold, and treacherous diſpoſition; and though dull of underſtanding, yet confident.

Thus thoſe who chiefly mind the brutal part,
May learn to chooſe a huſband by this art.

A great wide mouth ſhews a man to be bold, warlike ſhameleſs, ſtout, a great liar, talkative, and a great eater, but dull as to his intellects. A little mouth ſhews the perſon to be of a quick and pacific temper, ſomewhat fearful, but faithful, ſecret modeſt, bountiful, and a little eater. He whoſe mouth ſmells of a bad breath, is one of a corrupted liver or lungs, is often times vain, wanton, deceitful, of indifferent intellects, envious, covetous, and a promiſe breaker. He that has a ſweet breath is the contrary.

Thus from the mouth itſelf, we likewiſe ſee
What ſigns of good and bad may gathered be;
For let the wind blow eaſt, weſt, north, or ſouth,
Both good and bad proceed out of the mouth.

The lips when they are very big and blubbering, ſhew a perſon to be credulous, fooliſh, dull and ſtupid, and apt to be enticed to any thing. Lips of a different ſize, denote a perſon to be diſcreet, ſecret, judicious of a good wit, but ſomewhat haſty. To have lips well colored, and more thin than thick, ſhews a perſon to be good humored, and more eaſily perſuaded to do good than evil. To have one lip bigger than the other, ſhews variety of fortunes, denotes a dull ſluggiſh temper, and an indifferent underſtanding.

The lips they ſo much dote on for a kiſs,
Oft tell fond lovers when they do amiſs.

When the teeth are ſmall, and but weak in performing their office, and eſpecially if they are ſhort and few, tho' the party be of a weak conſtitution, yet they denote him to be of a meek diſpoſition, honeſt, faithful, and ſecret, in whatſoever he is entruſted with. To have ſome teeth longer and ſome ſhorter than others, denote a perſon to be of a good apprehenſion, but bold, diſdainful, envious and proud. To have teeth very long, and growing ſharp towards the end, if they are long in chewing, and thin, denotes the perſon to be envious, gluttenous, bold, ſhameleſs, unfaithful, and ſuſpicious. When the teeth look very brown or yellowiſh, whether they be long or ſhort, it ſhews the perſon to be of a ſuſpicious temper, envious, deceitful, and turbulent. To have teeth ſtrong and cloſe together ſhews the perſon to be of a long life, a deſirer of novelties, and things that are fair and beautiful, but of an high ſpirit, and one that will have

his humor in all things: he loves to hear news, and afterwards to repeat it and is apt to entertain any thing in his own behalf. To have teeth thin and weak shews a weak, feeble man, one of short life, and of a weak apprehension: but chaste, shamefaced, tractable, and honest.

Thus from the teeth the learned can portend
Whether man's steps to vice or virtue bend.

A tongue too swift in speech, shews a man to be downright foolish, or at best but a very vain wit. A stammering tongue, or one that stumbles in the mouth, signifies a man of a weak understanding, of a wavering mind, quickly in a rage, and soon pacified. A thick and rough tongue denotes a man to be apprehensive, subtle and full of compliments, yet vain and deceitful, treacherous, and prone to impiety. A thin tongue shews a man of wisdom and sound judgment: very ingenious, and of an affable disposition, yet sometimes timorous, and too credulous.

No wonder 'tis that from men's speech we see
Whether they wise, or whether foolish be;
But from a silent tongue our authors tell
The secret passions within men that dwell.

A great and full voice in either sex, shew them to be of a great spirit, confident, proud and wilful. A faint or weak voice, shews a person of a good understanding, nimble fancy, a little eater, but weak of body and timorous. A loud and shrill voice denotes one sagacious and ingenious, but capricious, vainglorious, and weak, too credulous. A strong voice when a man sings, denotes a strong constitution, a good understanding, ingenious, amorous A weak and trembling voice, denotes one to be envious, suspicious, slow in business, and fearful. A loud, shrill and unpleasant voice, signifies one bold and valiant, but quarrelsome, injurious, and wedded to his own humor. A rough and hoarse voice, declares one to be a dull and heavy person of much guts and little brains. Full and yet mild voice, and pleasing to the hearer, shews a person to be quiet and peaceable, thrifty and secret, not prone to anger. A voice beginning low or in the bass, and ending high in the treble, denotes a person to be violent, angry, bold, secure.

Thus by our voice 'tis to an artist known
Unto what virtue or to what vice we're prone:
And he that of a good wife will make choice,
May choose her by observing of her voice.

A thick and full chin, abounding with flesh, shews a man inclined to peace, honest, but slow in invention, and easy to be drawn to good or evil. A picked chin, reasonably full of flesh, shews a good understanding, a high spirit, and laudable conversation. A double chin, shews a peaceable disposition, but dull apprehension, vain, credulous, and secret in his actions A crooked chin bending upwards, and picked for want of flesh, is, according to nature, a very bad man, proud, imprudent, envious, threatening, deceitful, prone to anger and treachery, and a great thief.

Thus, from the forehead to the chin we've shewn
How mankind's inclinations may be known;
From which th' observing reader still may find
We're more to evil, than to good inclin'd.

Young men usually have hair begin to grow upon their chins at 15 years of age, and sometimes sooner. These hairs proceed from the superfluity of heat, the fumes whereof ascend to their chins, like smoke to the funnel of a chimney; and because it can find no open passage, by which it may ascend higher, it vents itself in hairs which are called the beard. There are few women that have hair on their cheeks, and the reason is, those humors which cause hair to grow on the cheeks of a man, are evacuated by women in their monthly courses, which they have more or less, according to the heat or coolness of the constitution: yet sometimes women of a hot constitution have hair on their cheeks but more commonly on their lips or near their mouths, where the heat most aboundeth; And such women are much addicted to the company of men, and of a strong and manly constitution. A woman who hath little hair on her cheeks, or about her mouth and lips, is of a good complexion, weak constitution, shamefaced, mild and obedient; whereas, a woman of a more hot constitution is otherwise. But in a man, a beard well composed and thick of hair signifies him good natured, honest, loving, sociable and full of humanity; on the contrary, he that hath little beard, is, for the most part, proud, pining, peevish, and unsociable. They who have no beards, have always shrill and strange squeaking voices, are of a weak constitution, as is apparent in the case of eunuchs, who, after they are deprived of their virility, are transformed from the nature of men into the condition of women.

Of men and women's beards I might say more,
But prudence bids me this discourse give o'er.

Great and thick ears are certain signs of a foolish person, of a bad memory, and worse of understanding; but small, thin ears, shew a person to be of good wit, grave, secret, thrifty, modest; of good memory, and willing to serve his friend. Ears longer than ordinary, signify a bold man, uncivil, vain, foolish, of small industry, but a great stomach.

Who his just praise unwillingly does hear,
Shews a good life, as well as a good ear.

A face apt to sweat on every motion, shews the person to be of a hot constitution, vain, luxurious, of a good stomach, but bad understanding and worse conversation. A very fleshy face denotes a fearful disposition, a merry heart, bountiful and discreet easy to be intreated, and apt to believe any thing. A lean face, denotes a good understanding, but somewhat capricious and disdainful in his conversation. A little round face shews a person to be simple, fearful, of a bad memory, and a clownish disposition. A plump face and full of carbuncles, shews a man to be a great drinker, vain and dareing. A face red and high colored shews a man to be choleric, and not easily pacified. A long and lean face shews one to be bold in speech and action, but foolish, quarrelsome, proud and injurious. A face every way of a due

proportion, denotes an ingenuous, perſon fit for any thing, and well inclined. A broad, full, fat face, ſhews a dull heavy conſtitution, and that for one virtue has three vices. A plain flat face without any riſing, ſhews a perſon to be very wiſe, loving and courtly, faithful to his friend, and patient in adverſity. A face ſinking down a little, with creaſes in it, inclining to leanneſs denotes a perſon to be laborious, but envious, deceitful, falſe, quarrelſome, vain, ſilly, clowniſh. A face of a handſome proportion, and more inclined to fat than lean, ſhews a perſon juſt in his actions, true to his word, civil, reſpectful, and of an extraordinary memory. A crooked face, long and lean denotes a man endued with as bad qualities, as the face is with ill features. A face broad about the brows, and ſharper and leſs towards the chin, ſhews a man ſimple and fooliſh, vain, envious, deceitful and quarrelſome. A face well colored, full of good features, of an exact ſymmetry and juſt proportion, is commonly the index of a fairer mind, and ſhews the perſon to be well diſpoſed; but yet virtue is not ſo impregnably ſeated there, but that by ſtrong temptation, eſpecially of the fair ſex, it may be ſupplanted and overcome by vice. A pale complexion, ſhews the perſon not only to be fickle, but malicious, treacherous, proud, and extremely unfaithful. A face well colored ſhews the perſon to be of a praiſeworthy diſpoſition, ſound complexion, eaſy of belief, reſpectful to his friend, ready to do a courteſy, and very eaſy to be drawn to any thing.

Thus phyſiognomy readeth in each face
But vice or virtue we're moſt prone t' embrace:
For in man's face there hardly is a line
But of ſome inward paſſion 'tis a ſign:
And he that reads this ſection o'er may find
The faireſt face hath ſtill the cleareſt mind.

A great head and round withal, denotes a perſon to be ſecret, ingenious, laborious, conſtant and honeſt. The head whoſe gullet ſtands forth, and inclines towards the earth, ſignifies a perſon thrifty, wiſe, peaceable, ſecret, of a retired temper, and conſtant in the management of his affairs. A long head and face, and great withal, denotes a vain, fooliſh and idle perſon, credulous and envious. To have one's head alway ſhaking and moving from ſide to ſide, denotes a ſhallow, weak, unſtable perſon, given to lying, a great talker, and prodigal in all his fortunes. A big head and broad face, ſhews a man to be courageous, a great hunter after women, ſuſpicious, bold, ſhameleſs. A very big head, but not ſo proportionate to the body, and a ſhort neck and gullet, denotes a man of apprehenſion, wiſe ingenious, of a ſound judgment, faithful, true and courteous to all. He is weak, yet apt to learn, but unfortunate in his actions. And ſo much ſhall ſuffice with reſpect to judgment from the head and face.

CHAP. III.

Of Judgment drawn from ſeveral Parts of Man's Body, &c.

IN The body of a man, the head and face are the principal parts, being the index which heaven has laid open to every one's view, to make a judgment therefrom, therefore I have been the larger in my judgment from the ſeveral parts thereof

But as to the other parts not so obvious to the eyes, I shall be much more brief; yet I would proceed in order.

The throat, if it be white, whether it be fat or lean, shews a man to be vainglorious, timorous, wanton and much subject to cholar. If the throat be so thin and lean that the veins appear, it shews a man to be weak, slow, and of a dull and heavy constitution.

A long neck shews one to have a long and slender foot, and that he is stiff and inflexible. A short neck shews one to be witty and ingenious, but deceitful and inconstant, and a great lover of peace and quietness.

A lean shoulder bone signifies a man to be weak, timorous, peaceful, not laborious, and yet fit for any employment. Large shoulder bones denote a strong man, faithful, but unfortunate; somewhat dull of understanding, laborious, contented, a great eater and drinker. He whose shoulder bone seems to be smooth, is modest and temperate. He whose shoulder bone bends and is crooked inwardly, is commonly a dull person and deceitful.

Long arms hanging down, and touching the knees, denote a man liberal, but vainglorious, proud and inconstant. He whose arms are very short in respect to his body is a man of high and gallant spirit, and of a graceful temper. He whose arms are full of bones, sinews and flesh, is a great desirer of novelties, credulous and apt to believe every thing. He whose arms are very hairy, whether they be lean or fat, is for the most part a luxurious person, weak in body and mind, very suspicious and malicious. He whose arms have no hair on them at all, is of a weak judgment, angry, vain, wanton, credulous, a deceiver, and very apt to betray his dearest friends.

CHAP. IV.

Of Palmistry, shewing the various Judgments drawn from the hand

BEING engaged, in this third part, to shew what judgments may be drawn, according to physiognomy, from the several parts of the body, and coming in order to speak of the hands, it has put me under the necessity of saying something about palmistry, which is a judgment made of the conditions, inclinations, and fortunes of men and women, from the various lines and characters nature has imprinted in their hands, which are almost as various as the hands that have them.

The reader should remember that one of these lines of the hand, and which indeed is reckoned the principal is called the line of life; this line incloses the thumb separating it from the hollow of the hand. The next to it called the natural line, takes its beginning from the rising of the fore finger, near the line of life, and reaches to the table line, and generally makes a triangle. The table line commonly called the line of fortune, begins under the little finger, and ends near the middle finger. The girdle of Venus, which is another line so called begins near the first joint of the little finger, and ends between the fore finger and the middle finger. The line of death is that which plainly appears in a counter line to that of life, and is called the fifter line, ending usually at the other ends; for when the line

of life is ended, death comes, and it can go no farther. There are lines in the fleshy parts, as in the ball of the thumb, called the Mount of Venus: under each of the fingers are also mounts, each governed by several planets; and the hollow of the hand is called the Plain of Mars. Thus,

The thumb we to dame Venus' rule commit,
Jove the fore finger sways as he thinks fit:
Old Saturn does the middle finger guide;
O'er the ring finger Sol does still preside;
The outside drawn, pale Cynthia does direct:
And unto the hollow Mars does much inspect;
The little finger does to Merc'ry fall,
Which is the nimblest plannet of them all.

I proceed to give judgment from the several lines. In Palmistry the left hand is chiefly to be regarded, because therein the lines are most visible, and have the strictest communication with the heart and brain. In the next place, observe the line of life, and if it be fair, extending to its full length, and not broken with an intermixture of cross lines, it shews long life and health; and it is the same if a double line of life appear, as there sometimes does. When stars appear in this line, it signifies great losses and calamities: if on it there be the figures of two G's or a Y, it threatens the person with blindness; if it wraps itself about the table line, it promises wealth and honor to be attained by prudence and industry. If the line be cut jagged at the upper end, it denotes much sickness; if this line be cut by any lines coming from the Mount of Venus, it declares the person to be unfortunate in love and business also, and threatens him with sudden death. A cross between the line of life and the table line, shews the person to be very liberal and charitable, and of a noble spirit.

The table line, when broad and of a lively color, shews a healthful constitution, a quiet contented mind, and a courageous spirit; but if it have crosses towards the little finger, it threatens the party with much affliction by sickness. If the line be double, or divided into three parts at any of the extremities, it shews the person to be of a generous temper, and a good fortune to support it; but if this line be forked at the end, it threatens the person shall suffer by jealousies, and loss of riches gotten by deceit. If three points such as these ∴ are found in it, they denote the person prudent and liberal, a lover of learning, and of a good temper. If it spreads towards the fore and middle finger, and ends blunt it denotes preferment.

The middle line has in it often very significant characters. Many small lines between this and the table line threaten the party with sickness, but also give him hopes of recovery. A half-cross branching into this line, shews honor, riches and good success in all undertakings. A half moon denotes cold and watery distempers; but a sun or stars promises prosperity and riches: This line double, in a woman, shews she will have several husbands, but no children.

If the line of Venus happens to be cut or divided near the fore finger, it threatens ruin to the party, and that it shall befal him

by means of lascivious women and bad company. Two crosses on this line, one near the fore finger and the other bending towards the little finger, shew the party to be weak, inclined to modesty and virtue: and in women generally denotes modesty.

The liver line, if it be straight, and crossed by other lines, denotes a sound judgment, and a piercing understanding; but if it be winding, crooked and bending outwards, it shews deceit and flattery. If it makes a triangle or quadrangle, it shews one to be of a noble descent, ambitious of honor and promotion. If this line and the middle line begin near each other, it denotes a man to be weak in judgment, but if a woman, danger by hard labor.

The plane of Mars being the hollow of the hand, most of the lines passing through it, are very significant. Being hollow, and the lines crooked and distorted, it threatens the party to fall by enemies. When the lines beginning at the wrist are long within the plane reaching to the brawn of the hand, it shews the person to be of a hot and fiery spirit, given to quarreling. If deep large crosses be in the middle plane, it shews the party shall obtain honor by martial exploits: but if a woman, that she shall have several husbands. and easy labor with her children.

The line of death is fatal, and threatens with sickness and short life, when crosses appear in it. A clouded moon therein threatens a child bed woman with death. A star like a comet, threatens ruin by war, or death by pestilence: But if a bright sun appear therein, it promises long life and prosperity.

The lines of the wrist being fair, denote good fortune, but if broken and crossed the contrary.

Thus he that nature richly understands,
May from each line imprinted in his hands,
His future fate and fortune come to know,
And in what path it is his feet shall go:
His secret inclinations he may see,
And to what vice he shall addicted be:
To the end that, when he looks into his hand,
He may upon his guard the better stand,
And turn his wand'ring steps another way
Whene'er he finds he does from virtue stray.

CHAP. II.

Judgments drawn from the several parts of the Body.

A LARGE and full breast, shews a man valiant, but proud, soon angry, and hard to deal with. He whose breast is narrow, rising a little in the middle, is by the best rules of physiognomy of a clear spirit, great understanding, very faithful, clean both in mind and body, yet soon angry and inclined long to keep it. He whose breast is somewhat hairy, is very luxurious, and serviceable to another. He who hath no hairs upon his breast, is a man weak by nature, of a slender capacity, timorous, but of a laudable life, and conversation, much retired, and inclined to peace.

The back of the chine bone, if the flesh is hairy and lean, and higher than any other part behind, signifies a man shameless, beastly, and malicious. He whose back is large and fat, is there-

by denoted to be ſtrong and ſtout, but of a heavy diſpoſition, vain, ſlow, and full of deceit.

He or ſhe whoſe belly is ſoft all over, is weak, luſtful, and fearful, of good underſtanding, an excellent invention, a little eater, of various fortune. He whoſe fleſh is rough and hard, is of a ſtrong conſtitution, very bold, but proud, vain, and of a cruel temper. He whoſe skin is ſmooth, fat and white, is curious, vainglorious, timorous, malicious.

A thigh full of ſtrong briſtly hair inclined to curl, ſignifies one luſtful, and fit for copulation; thighs with little hair, and that ſoft, ſhews the perſon to be chaſte, having no great deſire to veneral pleaſures, and will have but few children

The legs of both men and women have a fleſhy ſubſtance behind called calves; now a great calf, and large bone, and hairy denotes the perſon to be ſtrong, bold, dull in underſtanding, ſlow in buſineſs, inclined to procreation, and for the moſt part, fortunate. Little legs and little hair on them, ſhew the perſon to be weak, fearful, of a quick underſtanding, and neither luxurious at bed or board. He whoſe legs do much abound with hair, is luſtful, luxurious, ſtrong but fickle, and abounding with ill humors.

The feet of either men or women, if broad and thick with fleſh and long in figure, eſpecially if the ſkin feels hard, of a ſtrong conſtitution, but of weak intellects. But feet that are thin and lean, and ſoft, ſhew a weak body, but a ſtrong underſtanding, and excellent wit.

The ſoles of the feet do adminiſter as plain and evident ſigns, to know the diſpoſition and conſtitution by, as the palms of the hands, being as full of lines, by which all the fortunes or misfortunes of man or woman may be known, and their inclinations appear. But this in general we may take notice of, that many long lines and ſtrokes do preſage many afflictions, and a very troubleſome life, attended with much grief, care and poverty. But ſhort lines, if they are thick and full of croſs lines, are yet worſe in every degree. Thoſe the ſkin of whoſe ſoles are very thick, are generally ſtrong and venturous; whereas, thoſe the the ſkin of whoſe ſoles are thin, are generally weak and timorous

I ſhall now, having given an account of what judgments may be formed from the ſeveral parts of the body, before I conclude, give an account of what may be drawn by the rules of Phyſiegnomy, from things extraneous, which are found upon many, and which indeed to them are parts of the boby, but are ſo far from being neceſſary parts, that they are the deformity and burden of it, and ſpeak of the habits of the body as they are diſtinguiſhed perſons.

I. *Of crooked and deformed perſons.*

A CROOKED breaſt or ſhoulder, or the exuberance of fleſh in the body either of man or woman, ſignifies the perſon to be extremely parſimonious, and ingenious, and of great underſtanding, but very covetous, deceitful, malicious, and of a bad memory; either extremely virtuous or vicious, ſeldom in a medium. But if the perſon deformed hath an ex-

creſſence on his breaſt, inſtead of the back, he is for the moſt part of a double heart, and very miſchievous.

II. *Of the divers Manners of going, and particular poſtures both of Men and Women.*

HE or ſhe that goes ſlowly, making great ſteps as they go, are generally perſons of bad memory, dull of apprehenſion, given to loitering, and ſlow of belief. He who goes apace, and makes ſhort ſteps, is moſt ſuccefsful in all his undertakings, ſwift in his imaginations, and humble in the diſpoſition of his affairs. He who makes wide and uneven ſteps, and ſide long is one of a greedy ſordid nature, ſubtle, malicious, and wills to do evil.

III. *Of the Gait or Motion in Men or Women.*

EVERY man and woman hath a certain gait or motion. For a man to be ſhaking his head, or uſing any light motion with his hands or feet, whether he ſtands, ſits, or ſpeaks, is ſuperfluous, unneceſſary, and unhandſome: and ſuch, by the rules of phyſiognomy are vain, unwiſe, unchaſte, detractors, unſtable and unfaithful. He or ſhe who have little motion when diſcourſing with any one, is for the moſt part, wiſe, well bred, frugal, faithful induſtrious and fit for any employment. He whoſe poſture is forwards, and backwards, mimical, is thereby denoted to be a vain, ſilly perſon, dull of wit, and very malicious. He whoſe motion is lame and limping, or otherwiſe imperfect, or that counterfeits an imperfection, is denoted to be envious, malicious, falſe and detracting.

IV. *Judgments drawn from the ſtature of a man.*

PHYSIOGNOMY draws alſo ſeveral judgments from the ſtature of a man; ſuch as, If a man be ſtraight and upright, inclined rather to leanneſs than fat it ſhews him to be bold, cruel, proud, clamorous, hard to pleaſe and harder to be reconciled when diſpleaſed, very frugal, deceitful and malicious. To be of a tall ſtature and corpulent with it, denotes him to be not only handſome, but valiant alſo; although of no extraordinary underſtanding, and which is worſt of all, ungrateful. He who is extremely tall, and very lean and thin, is a projecting man, that deſigns no good to himſelf, and ſuſpects every one to be as bad as himſelf, importunate to obtain what he deſires, and extremely wedded to his own humors. He who is thick and ſhort, is vain, envious, ſuſpicious, ſhallow of apprehenſion, eaſy of belief, and long before he forgets an injury. He who is lean and ſhort, but upright, is, by the rules of phyſiognomy, wiſe and ingenuous, bold and confident, of a good underſtanding, but of a deceitful heart. He who ſtoops as he goes not by age but cuſtom, is laborious, a retainer of ſecrets, but very incredulous. He that goes with his belly ſtretching forth, is forcible, merry, and eaſy to be perſuaded.

V. *General Obſervations worthy of Note.*

WHEN you find a red man to be faithful, a tall man to be wiſe, a fat man to be ſwift on foot, a lean man to be a fool, a handſome man not proud, a poor man not envious, a whitely man not wiſe, one that talks through the noſe to ſpeak without ſnuffing, a knave no liar, an upright man not to walk

ſtraight, one that dwells when he ſpeaks not crafty and circumventing; a man of a hot conſtitution not luſtful, one that winks on another with his eyes, not falſe and deceitful, one that knows how to ſhuffle his cards, ignorant how to deal them; a rich man prodigal, a ſailor and hangman pitiful, a poor man to build churches, a higler not to be a liar and a praiſer of his ware, a buyer not to find fault with and undervalue that which he would willingly buy, a quack doctor to have a good conſcience, a bailiff or catchpole not to be a mercileſs villain, an hoſteſs not to over reckon you, and an uſurer to be charitable; then ſay you have found a prodigy, or men acting contrary to the courſe of their nature.

END OF THE MASTER PIECE.

FAMILY PHYSICIAN.

Being choice and approved Remedies for the ſeveral diſtempers incident to the human Body.

A powder for the Epilepſy or falling ſickneſs.

TAKE of opponax, crude antimony, dragon's blood, caſtor, peony ſeeds, of each an equal quantity, make them into a ſubtle powder, the doſe of half a dram, in black cherry water. Before you take it, the ſtomach muſt be cleanſed with ſome proper vomit, as that of Mynſinct's emetic Tartar, from four grains to ſix. For children, ſalt of vitriol, from a ſcruple to half a dram.

A vomit for a ſwiming in the head.

Take cream of tartar half a ſcruple, caſtor two grains, mix all together for a vomit, to be taken at four o'clock in the afternoon. At night, going to bed, it will be very proper to take a doſe of the apoplectic powder.

For ſpitting of Blood.

Take conſerve of comfrey, and of hips, of each an ounce and a half, conſerve of red roſes three ounces, dragon's blood a dram, ſpecies of hyacinth two ſcruples, red coral a dram; mix with the ſyrup of red poppies, and make a ſoft electuary! take the quantity of a walnut night and morning.

A powder againſt Vomiting.

Take crabs eyes, red coral, ivory, of each two drams; burnt hartſhorn, 1 dram, cinnamon and red ſaunders of each half a dram; make all for a ſubtile powder and take half a dram.

For the Bloody Flux.

Take a dram of powder of rhubarb in a ſufficient quantity of conſerve of red roſes, early in the morning, and at night take of torrefied or roaſted rhubarb half a dram, diaſcordium a dram and a half, liquid laudanum cydoniated a ſcruple. Mix them and make a bolus.

For an inflamation of the Lungs.

Take curious water 10 ounces, water of red poppies 3 ounces, ſyrup of poppies 1 ounce, pearl prepared a dram: Make a julep and take ſix ſpoonfuls every four hours.

For weakneſs in Women.

After a gentle purge or two, take the following decoction, viz. a quarter of a pound lignumvitæ, ſaſſafras 2 ounces; boil the whole in ſix quarts of water to a gallon: ſtrain and keep it for uſe: Take half a pint firſt in the morning, faſting for two hours after; another at four of the clock in the afternoon: And a third at going to bed.

An ointment for the Itch.

Take ſulphur vive, in powder, half an ounce; oil of tartar per deliquium a ſufficient quantity; ointment of roſes 4 oz. make a liniment, to which add a ſcruple of oil of rhodium to aromatiſe it, and rub the parts effected with it.

For Worms in Children.

Take worm ſeed half a dram, flower of ſulphur a dram, ſal prunella half a dram: mix and make a powder; give as much as will lie upon a ſilver threepence night and morning, in treacle or honey. For grown perſons add a ſmall quantity of aloe roſatum, and ſo make them up into pills 3 or 4 of which may be taken every morning.

A Diet Drink for the Vertigo, or ſwimming of the Head.

Take ſmall ale, and boil it in the leaves of miſtletoe of the apple tree, roots of male peony and peony flowers; then put it into a veſſel of four gallons, in which hang a bag of half a pound of peacock's dung, and 2 drams of cloves bruiſed; drink it as a common drink.

For a looſeneſs.

Take of Venice treacle and diaſcordium, of each half a dram, in warm ale, water gruel, &c. at night going to bed.

For fevers in Children.

Take of crabs' eyes 1 dram, cream of tartar half a dram, white ſugar candy finely powdered, the weight of both: mix them well together, and give as much as will lie upon a ſilver 3d. in a ſpoonful of barley water or ſack whey.

For an Headache of long ſtanding.

Take the juice of powder of diſtilled water of hog lice, and continue the uſe of it.

For the Gripes in Children.

Give a drop or two of the oil of anniſeed in a ſpoonful of penada, milk, or any thing you ſhall think proper.

For an Ague.

Take the common bitter drink, without the purgatives 2 quarts ſalt of wormwood 2 oz. ſaffron a dram. After a vomit or convenient purge, take half a pint of this three times a day, in the morning faſting, mid day and at night.

For the Cholic.

Take anniſeed, ſweet fennel, coriander, carraway ſeeds, 2 drams each, cummin ſeed a dram, raſed ginger a ſmall quantity bruiſe all in a mortar, and put them into a quart of Nantz brandy to infuſe 3 days, ſhaking the bottle 3 or 4 times a day, then ſtrain it; take 2 or 3 ſpoonfuls in the fit.

For the palpitation or beating of the Heart.

Take powder of crab's eyes, burnt hartſhorn, red coral, of each a dram, Engliſh ſaffron a ſcruple, mix and make powder. Take a ſcruple of it night and morning in a ſpoonful of barley water, drinking a draught after it.

For a pain in the ſtomach proceding from wind.

Take Venice treacle 4 drams, dittany, ſeeds of ambos daucus, each ſix grains, galangal, cloves, corol, wood of aloes, each a ſcruple, conſerve of roſes 1 oz. conſerve of mint half an ounce, with ſyrup of mint make an electuary. Doſe; the quantity of a nutmeg in the morning, faſting.

Lozenges reſtorative in Conſumption

Take pine nuts prepared two drams and a half, green fuſtic two drams. ſpecies diambrae two ſcruples, cinnamon and cloves half a dram each, galangal a ſcruple, nutmegs two ſcruples,

white ginger, half a dram. Xilo aloes half a ſcruple, with four ounces and a half of ſugar diſſolved in roſe water, and of the ſpecies make a confection in lozenges.

Againſt Aches and Pains in the Joints.

Take powder of camopetys and gentian, of each five drams, dried leaves of rue three ounces; make all into a fine powder after due purging, give a dram of this night and morning, in a ſpoonful of white wine.

For Spots and Pimples in the ſkin.

Take black ſoap two ounces, ſulphur vive in powder one ounce, tie them in a rag, and hang them in a pint of vinegar for the ſpace of nine days: then rub and waſh the part gently twice a day, that is night and morning.

Purging Pills for the ſcurvy.

Take roſin of julep twenty grains, aromantic pills with gum two grains, vitriolated tartar twenty ſix grains, oil of juniper ten grains, with a ſufficient quantity of gum armoniac diſſolved in vinegar of ſquills. Take four at a time early in the morning faſting two hours after You may take them once a week.

A diſtilled Water for a confirmed Phthiſic.

Take leaves of ground ivy five handfuls, ſix nutmegs ſliced, two pound of the crumbs of wheat bread, three pound of ſnails, half boiled and ſliced into milk, and take it three or four times a day, ſweetened with ſugar and pearl of roſes.

A quieting Night draught when the Cough is violent.

Take of water of green wheat ſix ounces, ſyrup or diaſcordium three ounces Mix them, and take two or three ſpoonfuls at going to bed.

For Vomiting or Looſeneſs.

Take of Venice treacle one ounce, powder of tormentile roots contrayerva, pearl and prepared coral, of each a ſufficient quantity, with the ſyrup of dried roſes make an electuary: Take the quantity of a walnut every fourth or fifth hour; drink after it a draught of ale or beer, with a cruſt of bread, mace or cinnamon boiled in it.

A diſtilled Water for the Jaundice.

Take one pound of the roots of Engliſh rhubarb ſliced, the rinds of four oranges ſliced, filings of ſteel one pound, freſh ſtrawberries ſix pounds, three quarts of white wine: let them ſtand in infuſion for ſome time, diſtil all according to art. Take four ounces twice a day, with twenty drops of the ſpirit of ſaffron.

For the Rheumatiſm.

Take volatile ſalt of hartſhorn, volatile ſalt of amber, two drams each, crabs' eyes one ounce, cochineal a ſcruple; mix and make a powder. Take half a dram three times a day, or every four hours, keeping your bed and ſweating upon it.

For a violent toothache.

If the teeth be hollow, nothing cures but drawing, but if occaſioned through a defluxion of humors, firſt take a gentle purge and at night when you go to bed take a grain or two of London

laudanum, which will thicken the humor, ſtop the defluxions and conſequently remove the pain.

For Saint Anthony's Fire.

Bleeding premiſed, take frog ſpawn water, plantain water, half a pint each, ſugar of lead two drams; mix and ſhake the bottle till the ſalt is diſſolved. Dip a linen cloth in this water, and bathe the part affected; it cools wonderfully.

For the Black Jaundice.

Take flowers of ſal armoniac, diancum, and extract of gentian, of each a dram; ſalt amber a ſcruple; gum armoniac diſſolved in vinegar of ſquills ſuffices; make a maſs of ſmall pills, take it three or four mornings and evenings.

For ſtinking Gums without Rottenneſs.

Take powder of beſt myrrh one ounce: claret wine a pint; after two or three days infuſion, waſh your gums and mouth with it.

For the Rheumatiſm proceeding from the ſcurvy.

Take ſtone horſe dung a pound, white wine three or four quarts, diſtil according to art; take five or ſix ounces twice or thrice a day. Some take the infuſion only, but this exceeds it.

For a convulſive Cough in Children.

After a gentle vomit and purge, apply a bliſter to the nape of the neck; but if the diſtemper be obſtinate, cut an iſſue in the neck or arm; Keep them cloſe to a diet drink of ſhavings of ivory, ſaunders, and ſome diuretic ingredients. But if a ſpecific, you may have cupmoſs in powder every day in boiled milk, and the decoction of hyſſop, with a little caſtor and ſaffron.

For an inward bleeding.

Take leaves of plantain and nettles, of each three handfuls, bruiſe them well, and pour on them ſix ounces of plantain water; make a ſtrong emulſion, and drink the whole off.

For a bleeding at the noſe.

Take a dried toad, ſew it up in a ſilk bag, and hang it at the pit of the ſtomach a conſiderable time. This hath performed the cure when other medicines have failed.

For the ſame, take calcanthum rubefactum, or caput mortuum of vitriol half an ounce, boil it in a quart of quick lime water to a pint, when cold and ſettled, ſtrain it. Dip a tint in it, and thruſt it up the noſtril, or you may ſnuff it up.

Powder againſt Poiſon and Peſtilence.

Take zeodory, euphorbium, corallina, tormentil, gentian, common dittany, ſealed earth, armenian bole, red and white coral, ſpikenard, maſtich, clove jelly, flowers, leſſer centuary, red ſuanlers, bone of a ſtag's heart, camphire, of each equal parts. Make all into an impalpable powder; give one dram with ſorrel water, or with wine and ſorrel boiled together.

EXPERIENCED MIDWIFE.

PART I.

A GUIDE FOR CHILD BEARING WOMEN.

INTRODUCTION.

I HAVE given this book the title of the Complete and Experienced Midwife, both becauſe it is chiefly deſigned for thoſe that profeſs midwifery, and contains whatever is neceſſary for them to know in the practice thereof, and alſo becauſe it is the reſult of many years experience, and that in the moſt difficult caſes, and is therefore the more to be depended upon: A midwife is the moſt neceſſary and honorable office, being indeed a helper of nature: which therefore makes it neceſſary for her to be well acquainted with all the operations of nature in the work of generation, and inſtruments with which ſhe works: For the that knows not the operations of nature, nor with what tools ſhe works, ſhe muſt needs be at a loſs how to aſſiſt therein. And ſeeing the inſtruments of operation both in men and women are thoſe things by which mankind is produced, it is very neceſſary that all midwives ſhould be acquainted with them, that they may the better underſtand their buſineſs, and aſſiſt nature as there ſhall be occaſion. The firſt thing then neceſſary, as introductory to this treatiſe, is an ANATOMICAL DESCRIPTION of the ſeveral parts of generation both in men and women: and having deſigned throughout to comprehend much in a little room, I ſhall avoid all unneceſſary and impertinent matters with which books of this nature are for the moſt part too much clogged, and which are more curious than needful. And though I ſhould be neceſſitated to ſpeak plainly, that ſo I may be underſtood, yet I ſhall do it with that modeſty that none ſhall have need to bluſh, unleſs it be from ſomething in themſelves, rather than from what they ſhall find here, having the motto of the royal garter for my defence, which is, "*Honi ſoit qui maly penſe*;" or, Evil to him that evil thinks.

CHAP. I.

An Anatomical Deſcription of the Inſtruments of Generation in Man and Woman.

SECTION I.

Of the parts of Generation in Man.

AS The generation of mankind is produced by the coition of both ſexes, it neceſſarily follows that the inſtruments of generation are of two ſorts, to wit, male, and female: the operations of which are by action and paſſion, and herein the agent is the ſeed, and the patient blood: whence we may eaſily collect, that the body of man being generated by action and paſſion he muſt needs be ſubject thereunto during his life.

Now, since the instruments of generation are male and female, it will be necessary to treat of them both distinctly that the discreet midwife may be well acquainted with their several parts, and their various operations, as they contribute to the work of generation. And, in doing this, I shall give the honor of precedence to my own sex, and speak first of the parts of generation in man, which shall be comprehended under six particulars, viz. The preparing vessels, the corpus varicosum, the testicles or stones, the vasa deferentia, the seminal vessels, and the yard, of each of which in their order.

1. The first are the vasa preparentia, or preparing vessels, which are in number four, two veins, and as many arteries; and they are called preparing vessels from their office, which is to prepare that matter or substance which the stones turn into seed to fit it for the work. Whence you may note, that the liver is the original of blood, and distributes it through the body by the veins, and not the heart, as some have taught. As to the original of these veins, the right vein proceedeth from the vena cava, or great vein, which receives the blood from the liver and distributes it by its branches to all the body; the left is from the emulgent vein, which is one of the two main branches of the hollow vein passing to the reins. As to the arteries, they both arise from the great artery, which the Greeks call that which is indeed the great trunk and original of all the arteries. But I will not trouble you with Greek derivations of words, affecting more to teach you the knowledge of things than words.

2. The next thing to be spoken of is the corpus varicosum, and this is an interweaving of the veins and arteries which carry the vital and natural blood to the stones to make seed of. These though at their first descension they keep at a small distance the one from the other, yet before they enter the stones they make an admirable intermixture of twisting the one from the other, so that sometimes the veins go into the arteries, and sometimes the arteries into the veins; the substance of which is very hard and long, not much unlike a pyramid in form, without any sensible hollowness: The use is to make one body of the blood and vital spirits, which they both mix and change the color of, from red to white, so that the stones may, both have a fit matter to work upon, and do their work more easily; for which reason, the interweaving reacheth down to the very stones, and pierceth in their substance.

3. The stones are the third thing to be spoken of, called also testicles: in Latin, *Testes*, that is, witnesses, because they witness one to be a man. As to these I need not tell you their number, nor where nature has placed them, for that is obvious to the eye. Their substance is soft, white and spongy, full of small veins and arteries which is the reason they swell to such a bigness upon the flowing down of the humor in them. Their form is oval; but most authors are of opinion that their bigness is not equal, but that the right is the biggest, the hottest, and breeds the best and the strongest seed. Each of these stones hath a muscle, called, *cremaster*, which signifies to hold up, because they pull up the stones in the act of coition, that so the vessels being

ſlackened, may the better void the ſeed. Theſe muſcles are weakened both by age and ſickneſs; and the ſtones then hang down lower than in youth and health. Theſe ſtones are of great uſe, for they convert the blood and vital ſpirits into ſeed for the procreation of man. But this muſt not be underſtood as if they converted all the blood that comes into them into ſeed, for they keep ſome for their own nouriſhment. But beſides this, they add ſtrength and courage to the body; which is evident from this, that eunuchs are neither ſo hot, ſtrong, nor valiant, as other men, nor is an ox ſo hot or valiant as a bull.

4. The next in order are the *vaſa deferentia*, which are the veſſels that carry the ſeed from the ſtones to the ſeminal veſſels, which is kept there till its expulſion. Theſe are in number two, in color white, and in ſubſtance nervous or ſinewy; and form a certain hollowneſs which they have in them, are alſo called ſpermatic pores, they riſe not far from the preparing veſſels; and when they come into the cavity of the belly, they turn back again and paſs into the backſide of the bladder, between it and the right gut; and when they come near the neck of the bladder they are joined to the ſeminal galls, which ſomewhat reſemble the cells of an honey comb; which cells contain an oily ſubſtance, for they draw the fatty ſubſtance from the ſeed which they empty into the urinal paſſage, which is done for the moſt part in the act of copulation, that ſo the thin internal ſkin of the yard ſuffers not through the acrimony or ſharpneſs of the ſeed. And when the *vaſa deferentia* has paſſed as before declared, they fall into the *glandula poſtrata* which are the veſſels ordained to keep the ſeed, and which are next to be ſpoken of.

5. The ſeminal veſſels, called *glandulum ſeminale*, are certain kennels placed between the neck of the bladder, and the right gut, compaſſing about the *vaſa deferentia*, the urethra, or common paſſage for ſeed and urine, paſſing through the midſt of it, and may properly enough be called the conduit of the yard. At the mouth of the urethra, where it meets with the *vaſa deferentia*, there is a thick ſkin whoſe office is to hinder the ſeminal veſſels, which are of a ſpongy nature, from ſhedding their ſeed againſt their will; the ſkin is very full of pores, and through the heat of the act of copulation the pores open, and ſo give paſſage to the ſeed, which being of a very ſubtile ſpirit, and eſpecially being moved will paſs thro' the caruncle or ſkin as quickſilver through leather; and yet the pores of this ſkin are not diſcernable unleſs in the anatomy of a man, who had ſome violent running in the reins when he died, and then they are conſpicuous, thoſe veſſels being the proper ſeat of that diſeaſe.

6. The laſt of the parts of generation in man to be ſpoken of, is the yard, which has a principle ſhare in the work of generation; and is called *Penis*, from its hanging without the belly; and it conſiſts of ſkin, tendons, veins, arteries, ſinews and great ligaments and is long and round, being ordained by nature both for the paſſage for the urine, and for the conveyance of ſeed into the matrix. It hath ſome parts common with it to the reſt of the body, as the ſkin, or the *Membrana Carnoſa* and ſome

parts it has peculiar to itſelf, as the two nervous bodies, the Septum, the Urethra, the Glans, the four muſcles, and the veſſels. The ſkin, which the Latins called *Cutis*, is full of pores, through which the ſweat and ſuliginous or ſooty black vapors of the third concoction (which concocts the blood into fleſh) paſs out; theſe pores are very many and thick but hardly viſible to the eye; and when the yard ſtands not, it is flaggy; but when it ſtands, it is ſtiff: The ſkin is very ſenſible, becauſe the nerves concur to make up its being; for the brain gives ſenſe to the body by the nerves. As to the *Carnus Membrana*, or the fleſhy ſkin, it is ſo called, not becauſe its body is fleſhy ſkin, but becauſe it lies between the fleſh and paſſeth into other parts of the body underneath the fat, and ſticks cloſe to the muſcle: but in the yard there is no fat at all, only a few ſuperficial veins and arteries paſs between the former ſkin and this, which when the yard ſtands are viſible to the eye: Theſe are the parts common both to the yard and the reſt of the body. I will now ſpeak of thoſe parts of the yard which are peculiar to itſelf and to no other parts of the body: and thoſe are likewiſe ſix, as has been already ſaid of which it will alſo be neceſſary to ſpeak particularly: And,

1. Of the Nervous Bodies: Theſe are two, tho' joined together, and are hard, long and ſinewy, they are ſpongy within and full of black blood; the ſpongy ſubſtance of the inward part of it ſeem to be woven together like a net, conſiſting of innumerable twigs of veins and arteries. The black blood contained therein is very full of ſpirits, and the delights or deſire of Venus add heat to theſe, which cauſeth the yard to ſtand; and that is the reaſon that both veneral ſights and tales will do it. Nor need it be ſtrange to any, that Venus, being a planet cold and moiſt, ſhould add heat to thoſe parts, ſince by night, as the Pſalmiſt teſtifies, Pſal. cxxi. 6. Now this hollow, ſpongy intermixture or weaving was ſo ordered by nature, on purpoſe to contain the ſpirit of veneral heat, that the yard may not fall before it has done its work. Theſe two ſide ligaments of the yard, where they are thick and round, ariſe from the lower part of the ſhare bone, and at the beginning are ſeparated the one from the other, reſembling a pair of horns, or the letter Y where the Urethra, or common paſſage of urine and ſeed, paſſeth between them.

2. Thoſe nervous bodies of which I have ſpoken, ſo ſoon as they come to the joining of the ſhare bone, are joined by the *Sceptum Lucium*, which is the ſecond internal part to be deſcribed, which in ſubſtance is white and nervous, or ſinewy, and its uſe is to uphold the two ſide ligaments and the Urethra.

3. The third thing in the internal part of the yard is the Urethra, which is the paſſage or channel by which both the ſeed and urine is conveyed out thro' the yard. The ſubſtance of it is ſinewy, thick, ſoft and looſe, as the ſide ligaments are; it begins at the neck of the bladder, and, being joined to it, paſſeth to the glands. It has in the beginning of it three holes, of which the largeſt of them is in the midſt, which receives the u-

nine into it, the other two are ſmaller, by which it receives the ſeed from each ſeminal veſſel.

4. The yard has four muſcles; on each ſide two: theſe muſcles are inſtruments of voluntary motion, without which no part of the body can move itſelf. It conſiſts of fibrous fleſh to make its body, of nerves for its ſenſe, of veins for its nouriſhment, of arteries for its vital heat, of a membrane or ſkin to knit it together, and to diſtinguiſh one muſcle from another, and all of them from the fleſh. Of theſe muſcles, as I ſaid before, the yard has two on each ſide, and the uſe of them is to erect the yard, and make it ſtand, and therefore they are alſo called erectors: But here you muſt note, that of the two on each ſide the one is ſhorter and thicker than the other; and theſe are they that do erect the yard, and ſo are called erectors: But the two other being longer and ſmaller, their office is to dilate the lower part of the Urethra, both for making water, and emitting the ſeed; upon which account they are called Accelerators.

5 That which is called the Glands is the extreme part of the yard, which is very ſoft, and of a moſt exquiſite feeling by reaſon of the thinneſs of the ſkin wherewith it is covered: This is covered with the *Præputium*, or fore ſkin, which in ſome men covers the top of the yard quite cloſe, but in others it doth not; which ſkin moving up and down in the act of copulation, brings pleaſure both to man and woman: this outer ſkin is that which the Jews were commanded to cut off on the eighth day: this *Præputium*, or fore ſkin, is tied to the glands by a ligament or bridle, which is called *Franum*.

6. The laſt internal part of the yard are the veſſels thereof, veins nerves and arteries. Of theſe ſome paſs by the ſkin, and are viſible to the eye when the yard ſtands; others paſs by the inward part of the yard; the arteries are wonderfully diſperſed through the body of the yard, much exceeding the diſperſion of the veins: for the right artery is diſperſed to the left ſide, and the left to the right ſide. It hath two nerves, the leſſer whereof is beſtowed upon the ſkin, the greater upon the muſcles and body of the yard. But this much ſhall ſuffice to be ſaid in deſcribing the parts of generation in men: and ſhall, therefore in the next place, proceed to deſcribe thoſe of women, ſo that the induſtrious midwife may know how to help them in their extremities.

SEC. II. *Deſcribing the Parts of Generation in Women.*

WHATEVER ignorant perſons may imagine, or ſome good women think, they are unwilling thoſe private parts which nature has given them, ſhould be expoſed, yet it is in this caſe abſolutely neceſſary; for I do poſitively affirm, that it is impoſſible truly to apprehend what a midwife ought to do, if theſe parts are not perfectly underſtood by them, nor do I know any reaſon they have to be aſhamed to ſee or hear a particular deſcription of what God and nature hath given them, ſince it is not the having theſe parts, but the unlawful uſe of them that cauſes ſhame.

To proceed then, in this deſcription more regularly, I ſhall ſpeak in order of theſe following principal parts; 1ſt. Of the

Privy Paſſage : 2dly Of the womb : 3dly. Of the Teſticles, or Stones : 4thly Of the Spermatic Veſſels

1ſt. Of the Privy Paſſage. Under this head I ſhall conſider the ſix following parts.

1. The lips, which are viſible to the eye, and are deſigned by nature as a cover to the *Fiſſura Magna*, or great orifice ; theſe are framed of the body, and have pretty ſtore of ſpongy fat : and their uſe is to keep the internal parts from cold and duſt. Theſe are the only things that are obvious to the ſight, the reſt are concealed, and cannot be ſeen, unleſs the two lips are ſtretched aſunder, and the entry of the privities opened.

2. When the lips are ſevered, the next thing that appears is the Nymphæ or wings; they are formed of ſoft and ſpongy fleſh, and are in form and color like the comb of a cock.

3. In the uppermoſt part, juſt above the urinary paſſage, may be obſerved the Clitoris, which is a ſinewy and hard body, full of ſpongy and black matter within, like the ſide ligament of the yard ; repreſenting in form the yard of a man, and ſuffers erection and falling as a man's yard, in proportion to the deſire a woman hath in copulation ; and this alſo is that which gives a woman delight in copulation ; for without this a woman hath neither a deſire to copulation, and delight in it, nor can conceive by it. And I have heard that ſome women have had their Clitoris ſo long, that they have abuſed other women therewith ; nay, ſome have gone ſo far as to ſay, that thoſe perſons that have been reported to be Hermaphrodites, as having the genitals both of men and women, are only ſuch women in whom the Clitoris hangs out externally, reſembling the form of a yard. But though I will not be poſitive in that, yet it is certain, that the larger the Clitoris is in any woman the more luſtful ſhe is.

4. Under the Clitoris, and above the neck, appears the Orifice, or urinary paſſage, which is much larger in women than men, and cauſes their water to come from them in a great ſtream. On both ſides the urinary paſſage may be ſeen two ſmall membraneous appendices, a little broader above than below, iſſuing forth of the inward parts of the great lips, immediately under the Clitoris ; the uſe whereof is to cover the orifice of the urine, and defend the bladder from the cold air : So that when a woman piſſeth, ſhe contracts herſelf ſo, that ſhe conducts out the urine without ſuffering it to ſpread along the privities, and often without ſo much as wetting the lips ; and therefore theſe ſmall membraneous wings are called the *Nymphæ*, becauſe they govern the woman's water. Some women have them ſo great and long, that they have been neceſſitated to cut off ſo much as has exceeded and grew without the lips.

5. Near this are four Caruncles, or fleſhy knobs, commonly called Caruncles Myrtiformes : theſe are placed, on each ſide two, and a ſmall one above, juſt under the urinary paſſage, and in virgins are reddiſh, plump and round, but hang flagging when virginity is loſt : In virgins they are joined together by a thin and ſinewy ſkin or membrane, which is called the Hymen, and keeps them in ſubjection, and makes them reſemble a kind of roſe bud half blown. This diſpoſition of the Caruncles is the

only certain mark of virginity, it being in vain to ſearch for it elſe where, or hope to be informed of it in any other way: and 'tis from the preſſing and bruiſing the Caruncles, and forcing and breaking the little membranes (which is done by the yard in the firſt act of copulation) that there happens an effuſion of blood; after which they remain ſeparated, and never recover their firſt figure, but become more and more flat as the acts of copulation are increaſed; and in thoſe that have children they are almoſt totally defaced, by reaſon of the great diſtention theſe parts ſuffer in time of their labor. Their uſe is to ſtraighten the neck of the womb, to hinder the cold air from incommoding it, and likewiſe to increaſe mutual pleaſure in the act of coition: for the Caruncles being then extremely ſwelled, and filled with blood and ſpirits, they cloſe with more pleaſure upon the yard of a man, whereby the woman is much more delighted. What I have ſaid of the effuſion of blood which happens in the firſt act of copulation, though when it happens it is an undoubted ſign of virginity, ſhewing the Caruncles Myrtiformes have never been preſſed till then; yet when there happens no blood, it is not always a ſign that virginity is loſt before; for the Hymen may be broken without copulation by the deflexion of ſharp humors, which ſometimes happens to young virgins, becauſe in them it is thineſt; It is alſo done by the unſkilful applying of beſtaries to provoke the terms, &c. But theſe things happen ſo rarely, that thoſe virgins do thereby bring themſelves under a juſt ſuſpicion.

6. There is next to be ſpoken of, the neck of the womb, which is nothing elſe but the diſtance between the privy paſſage and the mouth of the womb, into which the man's yard enters in the act of copulation; and in women of reaſonable ſtature is about eight inches in length. 'Tis of a membraneous ſubſtance, fleſhy without, ſkinny, and very much wrinkled within; and that it may both retain the ſeed caſt into it in the act of copulation, and alſo that it may dilate and extend itſelf to give ſufficient paſſage to the infant at its birth. It is compoſed of two membranes, the innermoſt of them being white, nervous and circularly wrinkled much like the palate of an ox, that ſo it might either contract or dilate itſelf according to the bigneſs or length of the man's yard and to the end, that by the colliſion, ſqueezing, or preſſing made by the yard in copulation, the pleaſure may be mutually augmented. The external, or outmoſt membrane is red and fleſhy like the muſcle of the Fundament, ſurrounding the firſt, to the end the yard may be better cloſed within it; and it is by means of this membrane that the neck adheres the ſtronger to both the bladder and the right gut. The internal membrane in young girls is very ſoft and delicate, but in women much addicted to copulation it grows harder; and in thoſe that are grown aged, if they have been given much to venery, it is almoſt become griſly.

7. Having ſpoken of the privy paſſage, I come now to ſpeak of the womb or matryx, its parts are two; the mouth of the womb, and the bottom of it. The mouth is an orifice at the entrance into the which may be dilated and ſhut together like a

purſe; for though in the act of copulation it is big enough to receive the glands of the yard, yet after conception it is ſo cloſe ſhut, that it will not admit the point of a bodkin to enter; and yet again at the time of the woman's delivery it is opened ſo extraordinary, that the infant paſſeth through it into the world; at which time this orifice wholly diſappears, and the womb ſeems to have but one great cavity from its bottom to the very entrance of the neck. When a woman is not with child it is a little oblong and of a ſubſtance very thick and cloſe; but when ſhe is with child, it is ſhortened, and its thickneſs diminiſheth proportionably to its diſtention: And therefore it is a miſtake of ſome anatomiſts to affirm, that its ſubſtance waxeth thicker a little before a woman's labor; for any one's reaſon will inform them, that the more diſtended it is, the thiner it muſt be, and the nearer a woman is to the time of her delivery, the ſhorter her womb muſt be extended. As to the action by which this inward orifice of the womb is opened and ſhut, it is purely natural; for were it otherwiſe, there would not be ſo many baſtards gotten as there are; nor would ſome married women have ſo many children were it at their own choice, but they would hinder conception, though they would be willing enough to uſe copulation; for nature has attended that action with ſomething ſo pleaſing and delightful, that they are willing to indulge themſelves in the uſe thereof, notwithſtanding the pains that they afterwards endure, and the hazard of their lives which often follow it: And this comes, to paſs not ſo much from any inordinate luſt in women, as for that the geat DIRECTOR of nature, for the increaſe and multiplication of mankind, and even for all other ſpecies in the elementary world, hath placed ſuch a magnetic virtue in the womb, that it draws the ſeed to it as the loadſtone draws iron.

The author of nature has placed the womb in the belly, that the heat might always be maintained by the warmth of the parts ſurrounding it; it is therefore ſeated in the middle of the *Hypogaſtrum* (or the lower part of the belly) between the bladder and the rectum (or right gut) by which alſo it is defended from any hurt through the hardneſs of the bones; and it is placed in the lower part of the belly for the conveniency of copulation, and of a birth's being thruſt out at the full time.

It is of figure almoſt round, inclining ſomewhat to an oblong, in part reſembling a pear, for, from being broad at the bottom, it gradually terminates in the point of the orifice which is narrow.

The length, breadth and thickneſs of the womb differ according to the age and diſpoſition of the body; for, in virgins not ripe it is very ſmall in all its dimenſions, but in women whoſe terms flow in great quantities, and ſuch as frequently uſe copulation, it is much larger; and if they have had children, it is larger in them than in ſuch as have none; but in women of a good ſtature, and well ſhaped (it is as I have ſaid before) from the entry of the privy parts to the bottom of the womb, uſually about eight, but the length of the body of the womb alone does not exceed three inches, and the breadth thereof is nearly about the ſame, and of the thickneſs of the little finger,

when the woman is not pregnant; but when the woman is with child, it becomes of a prodigious greatneſs, and the nearer ſhe is to her delivery the more is the womb extended.

It is not without reaſon then that nature (or the God of nature rather) has made the womb of a membraneous ſubſtance; for thereby it does eaſier open to conceive and is gradually dilated from the growth of the *Fœtus*, or young one, and is afterwards contracted and cloſed again, to thruſt forth both it and the after burden, and then to retire to its primitive ſeat. Hence alſo it is enabled to expel any noxious humors which may ſometimes happen to be contained within it.

Before I have done with the womb which is the field of generation, and ought therefore to be more particularly taken care of (for as the ſeed of plants can produce no fruits, nor ſpring unleſs ſown in ground proper to waken and excite their vegetative virtue, ſo likewiſe the ſeed of a man, though potentially containing all the parts of a child, would never produce ſo admirable an effect, if it were not caſt into the fruitful field of nature, the womb) I ſhall proceed to a more particular deſcription of the parts thereof, and the uſes to which nature has deſigned them.

The womb then is compoſed of various ſimilary parts, that is of membranes, veins arteries and nerves. Its membranes are two, and they compoſe the principal part of its body: the outmoſt of which ariſeth from the *Peritonium*, or cawl, and is very thin, without ſmooth, but within equal, that it may the better cleave to the womb, as it were fleſhy and thicker than any elſe we meet with in the body when a woman is not pregnant and is interwoven with all ſorts of fibres or ſmall ſtrings, that it may the better ſuffer the extenſion of the child and the waters cauſed during the pregnancy, and alſo that it may the eaſier cloſe again after delivery.

The veins and arteries proceed both from the Hypogaſtrics and the Spermatic Veſſels, of which I ſhall ſpeak by and by; all theſe are inſerted and terminated in the proper membrane of the womb. The arteries ſupply it with blood for its nouriſhment, which, being brought thither in too great a quantity, ſweats through the ſubſtance of it, and diſtils as it were dew into the bottom of its cavity from whence do proceed both the terms in ripe virgins, and the blood which nouriſheth the embryo in breeding women. The branches which iſſue from the Spermatic Veſſels are in each ſide of the bottom of the womb, and are much leſs than thoſe which proceed from the Hypogaſtrics, thoſe being greater, and bedewing the whole ſubſtance of it. There are yet ſome other ſmall veſſels, which, ariſing the one from the other, are conducted to the internal orifice, and by theſe, thoſe that are pregnant do purge away the ſuperfluity of their terms when they happen to have more than is uſed in the nouriſhment of the infant; by which means nature has taken ſuch care of in the womb, that during its pregnancy, it ſhall not be obliged to open itſelf for the paſſing away thoſe excrementitious humors, which, ſhould it be forced to do might often endanger abortion.

As touching the nerves, they proceed from the brain, which furniſhes all the inner parts of the lower belly with them, which is the true reaſon it hath ſo great a ſympathy with the ſtomach, which is likewiſe very conſiderably furniſhed from the ſame part: ſo that the womb cannot be afflicted with any pain, but the ſtomach is immediately ſenſible thereof, which is the cauſe of thoſe loathings or frequent vomitings which happen to it.

But, beſides all theſe parts which compoſe the womb, it hath four ligaments, whoſe office is to keep it firm in its place, and prevent its conſtant agitation, by the continual motion of the inteſtines which ſurround it, two of which are above and two below: Thoſe above are called the broad ligaments, becauſe of their broad and membraneous figure, and are nothing elſe but the production of the *Peritonæum*, which growing out of the ſide of the loins towards the reins come to be inſerted in the ſides of the bottom of the womb, to hinder the body from bearing two much on the neck, and ſo from ſuffering a precipitation, as will ſometimes happen when the ligaments are too much relaxed; and do alſo contain the teſticles, and as well conduct the different veſſels as the ejaculatories to the womb. The lowermoſt are called round ligaments taking their original from the ſide of the womb near the horn from whence they paſs the groin, together with the production of the *Peritonæum* which accompanies them through the rings and holes of the oblique and tranſverſe muſcles of the belly where they divide themſelves into many little branches reſembling the foot of a gooſe, of which ſome are inſerted into the *os pubis* and, the reſt are loſt and confounded with the membranes that cover the upper and interior parts of the thigh; and it is that which cauſes that numbneſs which women with child feel in their thighs. Theſe two ligaments are long, round and nervous, and pretty big in their beginning near the matrix, hollow in their riſe, and all along to the *os pubis* where they are a little ſmaller, and become flat, the better to be inſerted in the manner aforeſaid; it is by their means the womb is hindered from riſing too high. Now, although the womb is held in its natural ſituation by means of theſe four ligaments, yet it has liberty enough to extend itſelf when pregnant, becauſe they are very looſe, and ſo eaſily yield to its diſtention. But beſides the ligaments, which keep the womb as it were in a poiſe, yet it is faſtened, for greater ſecurity, by its neck, both to the bladder and rectum, betweem which it is ſituated. Whence it comes to paſs, that if at any time the womb be inflamed it communicates the inflamation to the neighboring parts.

Its uſe, or proper action in the work of generation is to receive and retain the ſeed, and to reduce it from powder to action, by its heat, for the generation of the infant, and is therefore abſolutely neceſſary for the conſervation of the ſpecies. It alſo ſeems by accident to receive and expel the impurities of the whole body, as when women have abundance of whites and to purge away from time to time the ſuperfluity of blood, as it doth every month by the evacuation of blood, as when a woman is not with child. And thus much ſhall ſuffice for the def-

cription of the womb, in which I have been the larger, becauſe as I have ſaid before, it is the field of generation.

3d. The next thing to be deſcribed in the genetals of women is the teſticles, or ſtones, for ſuch women have, as well as men, but are not for the ſame uſe, and indeed are different from thoſe in men in ſeveral particulars; as 1ſt, in place, being within the belly, whereas in men they are without. 2dly, In figure being uneven in women, but ſmooth in men. 3dly, In magnitude, being leſſer in women than in men. 4thly, They are not fixed in women by muſcles, but by ligatures. 5thly, They have no proſtrates or kernels as men have. 6thly, They differ in form being depreſſed or flattiſh in women, but oval in men. 7thly, They have but one skin, whereas men have four: for the ſtones of men being more expoſed, nature has provided for them accordingly. 8thly, Their ſubſtance is more ſoft than in men. And, 9thly, Their temperature is colder than men. And as they differ in all theſe reſpects, ſo do they in their uſe, for they perform not the ſame actions as men's, as I ſhall ſhew preſently. As for their ſeat, it is in the hollowneſs of the Abdomen, and therefore not extremely pendulous, but reſt upon the ova or egg. It is true Galen and Hippocrates did erroneouſly imagine that the ſtones in women did both contain and elaborate ſeed as thoſe do in men, but it is a great miſtake; For the teſticles of a woman are as it were no more than two cluſters of eggs, which lie there to be impregnated by the moiſt ſpiritous particles, or animating effluvia conveyed out of the womb through the two tubes, or different veſſels: But however, the ſtones in women are very uſeful, for where they are defective, generation work is at an end. For though theſe little bladders, which are on their ſuperfices, contain nothing of ſeed, yet they contain ſeveral eggs (commonly to the number of twenty in each teſticle) one of which being impregnated in the act of coition, by the moſt ſpirituous part of the ſeed of the man, deſcends through the oviducts into the womb, and there in proceſs of time, becomes a living child.

4th. I am now to ſpeak of the ſpermatic veſſels in women, which are two, and are faſtened in their whole extent by a membraneous appendix to the broad ligament of the womb: Theſe do not proceed from the teſticles as in men, but are diſtant from them a finger's breadth at leaſt: and being diſpoſed after the manner of the miſeraic veins, are trained along the membraneous diſtance between the different veſſels and the teſticles. Their ſubſtance is as it were nervous and moderately hard; they are round, hollow, big, and broad enough at their end, joining to the horn of the womb. Some authors affirm, that by theſe women diſcharge their ſeed into the bottom of the womb: but the whole current of our modern authors run quite another way, and are poſitive that there is no ſeed at all in their veſſels; but that after the egg, or eggs in the avoric or teſticles are impregnated by the ſeed of the man, they deſcend through theſe two veſſels into the womb where being placed, the embryo is nouriſhed. Theſe veſſels are ſhorter in women than they are in men; for the ſtones of a woman lying within the belly, their

paſſage muſt needs be ſhorter ; but their various wreathing and windings in and out, make amends for the ſhortneſs of their paſſage. Theſe veſſels are not united before they come to the ſtones, but divide themſelves, into two branches, the largeſt whereof only paſſes through the teſticles, the leſſer to the womb both for the nouriſhment of itſelf and the infant in it I further obſerve, That theſe ſpermatic veins receive the arteries as they paſs by the womb, and ſo there is a mixture between natural and vital blood, that ſo the work might be better wrought, and that it is ſo, appears by this. That if you blow up the ſpermatic vein, you may perceive the right and left veſſel of the womb blown up ; from whence alſo the communication of all the veſſels of the womb may be eaſily perceived.

The deferentia or carrying veſſels ſpring from the lower part of the teſticles, and are in color white, and in ſubſtance ſinewy, and paſs not the womb ſtraight, but wreathed with ſeveral turnings and windings, as was ſaid of the ſpermatic veſſels, that ſo the ſhortneſs of the way may be likewiſe recompenced by their winding meanders ; yet near the womb they become broad again. They proceed in two parts from the womb, which reſemble horns, and are therefore called the horns of the womb. And this is all that is needful to be known or treated of concerning the parts of generation both in men and women.

Only ſince our modern anatomiſts and phyſicians are of different ſentiments from the ancients touching the woman's contributing of ſeed for the formation of the child as well as the man; the ancients ſtrongly affirming it, but our modern authors being generally of another judgment ; I will here declare the ſeveral reaſons for their different opinions, and ſo paſs on.

SECTION III.

Of the differences between the modern Phyſicians, touching the Woman's contributing Seed to the formation of the child.

I WILL not make myſelf a party in this controverſy, but ſet down impartially, yet briefly, the arguments on each ſide leaving the judicious reader to judge for himſelf

Though it is apparent (ſay the ancients) that the ſeed of man is the principal efficient and beginning of action, motion, and generation, yet it is evident that the woman doth afford ſeed, becauſe ſhe hath ſeminal veſſels, which elſe had been given her in vain ; but ſince nature forms nothing in vain, it muſt be granted they were made for the uſe of ſeed and procreation, and fixed in their proper places to contribute virtue and efficacy to the ſeed : And this, (ſay they) is further proved from hence. That if women at years of maturity uſe not copulation to object their ſeed, they often fall into ſtrange diſeaſes, and it is apparent that women are never better pleaſed than when they are often ſatisfied this way, which argues the pleaſure and delight they take therein : which pleaſure ſay they, is double in women, to what it is in men : for, as the delight of men in copulation conſiſts chiefly in the emiſſion of the ſeed, ſo women are delighted both in the emiſſion of their own, and the reception of the man's.

But againſt all this, our modern authors affirm, That the ancients were very erroneous: Forasmuch as the teſticles in women do not afford ſeed, but are two eggs, like thoſe of fowls and other creatures, neither have they any ſuch offices as men, but indeed are an Ovarium, or recepticle for eggs, wherein theſe eggs are nouriſhed by the ſanguinary veſſels diſperſed through them; and from thence, one or more are fœcundated by the man's ſeed, are conveyed into the womb by the oviducts. And the truth of this, ſay they is plain, that if you boil them, their liquor will have the ſame taſte, color, and conſiſtency, with the taſte of bird's eggs. And if it be objected, that they have no ſhells, the anſwer is eaſy; for the eggs of fowls while they are in the ovary, nay, after they are fallen into the uterus, have no ſhell; and though they have one when they are laid, yet it is no more than a fence which nature has provided for them againſt outward injuries, they being hatched without the body; but thoſe of women being hatched within the body, have no need of any other fence than the womb to ſecure them.

They alſo further ſay, there are in the generation of the fœtus, or young ones, two principles, active and paſſive: the active is the man's ſeed, elaborated in the teſticles, out of the arterial blood and animal ſpirits; the paſſive principle is the ovum or egg impregnated by the man's ſeed; for to ſay that women have true ſeed (ſay they) is erroneous. But the manner of conception is this: The moſt ſpirituous part of man's ſeed, in the act of copulation, reaching up to the ovarium or teſticles of the woman (which contains diverſe eggs, ſometimes more and ſometimes fewer) impregnates of them, which being conveyed by the ovaducts to the bottom of the womb, preſently begins to ſwell bigger and bigger, and drinks in the moiſture that is ſent thither, after the ſame manner that the ſeeds in the ground ſuck the fertile moiſture thereof to make them ſprout.

But, notwithſtanding what is here urged by our modern anatomiſts, there are ſome late writers of the opinion of the ancients, viz. that women have both and emit ſeed in the act of copulation, and the good women themſelves take it ill to be thought merely paſſive in thoſe wars, wherein they make ſuch vigorous encounters, and poſitively affirm, they are ſenſible of the emiſſion of their ſeed in thoſe engagements, and that a great part of the delight they take in that act conſiſts in it. I will not therefore go about to take any of their happineſs away from them, but leave them in poſſeſſion of their imagined felicity.

Having thus laid the foundation of this work, in the deſcription I have given of the parts dedicated to the work of generation both in man and woman I will now proceed to ſpeak of conception and of thoſe things that are neceſſary to be obſerved by women from the time of their conception to the time of their delivery.

CHAP. III.

Of conception; what it is; the ſigns thereof, whether conceived of a Male or Female; How women are to order themſelves after Conception.

SECTION I.

What Conception is, and the Qualifications requiſite thereto.

CONCEPTION is nothing elſe but an action of the womb, by which the prolific ſeed is received and retained, that an infant may be engendered and formed out of it. There are two ſorts of conception; the one according to nature, which is followed by the generation of the infant in the womb; the other is falſe, and wholly againſt nature, in which the ſeed changes into water, and produces only falſe conception, moles or other ſtrange matter. Now there are three things principally neceſſary in order to a true conception, ſo that generation may follow; to wit. diverſity of ſex, congreſſion, and emiſſion of ſeed. Without diverſity of ſexes there can be no conception; For, though ſome will have a woman to be an animal that can engender of herſelf, it is a great miſtake; there can be no conception without a man to diſcharge his ſeed into her womb. What they alledge of pullets laying eggs without a cock's treading them is nothing to the purpoſe; for thoſe eggs, ſhould they be ſet under a hen, will never become chickens, becauſe they never received any prolific virtue from the male: which is abſolutely neceſſary to this purpoſe, and is ſufficient to convince us that diverſity of ſex is neceſſary even to thoſe animals as well as to the generation of man. But diverſity of ſex though it be neceſſary to conception, yet it will not do alone; there muſt alſo be a congreſſion of thoſe different ſexes; for diverſity of ſex would profit little, if copulation did not follow. I confeſs I have heard of ſome ſubtle women, who to cover their ſin and ſhame, have endeavored to perſuade ſome perſons that they were never touched by men to get them with child; and that one in particular pretended to conceive, by going into a bath where a man had waſhed himſelf a little before, and ſpent his ſeed in it which was drawn and ſucked into her womb, as ſhe pretended. But ſuch ſtories as thoſe are only fit to amuſe them that know no better. Now that theſe different ſexes ſhould be obliged to come to the touch, which we call copulation or coition, beſides, the natural deſire of begetting their like, which ſtirs up men and women to it, the parts appointed for generation are endowed by nature with a delightful and mutual itch, which begets in them deſire to the action; without which it would not be very eaſy for a man born for the contemplation of divine myſteries to join himſelf by way of coition to a woman, in regard of the uncleanneſs of the part and of the action: and on the other ſide, if women did but think of thoſe pains and inconveniences to which they are ſubject by their great bellies, and thoſe hazards even of life itſelf, beſides the unavoidable pains that attend their delivery, it is reaſonable to believe they would be affrighted from it. But neither ſex make theſe reflections till after the action is over conſidering nothing beforehand but the pleaſure of enjoyment. So that it is from this voluptuous itch

that nature obligeth both ſexes to this congreſſion. Upon which the third thing followeth of courſe, to wit the emiſſion of ſeed into the womb in the act of copulation For the woman having received this prolific ſeed into her womb, and, retained it there, the womb thereupon becomes compreſſed, and embraces the ſeed ſo cloſely, that being cloſed, the point of a needle, (as ſaith Hippocrates) cannot enter it without violence; and now the woman may be ſaid to have conceived; the ſeveral faculties which are in the ſeed it contains, being reduced by its heat from power into action, making uſe of the ſpirits with which the ſeed abounds, and wich are the inſtruments by which it begins to trace out the firſt lineaments of all the parts; to which afterwards, of making uſe of the menſtruous blood flowing to it, it gives in time growth and final perfection. And thus much ſhall ſuffice to ſhew what conception is. I ſhall now proceed to ſhew.

Section II.

The ſigns of Conception.

THERE are many prognoſtics or ſigns of conception; I will name ſome of the chief, which are the moſt certain and let alone the reſt.

1. If a woman has been more than ordinary deſirous of copulation, and hath taken more pleaſure than uſual therein (which upon recollection ſhe may eaſily know) it is a ſign of conception.

2. If ſhe retain the ſeed in her womb after copulation, which ſhe may know if ſhe perceives not to flow down from the womb as it uſed to do before, for that is a ſure ſign the womb has received it into the inward orifice, and there retains it.

3. If ſhe finds a coldneſs and chillneſs after copulation it ſhews the heat is retired to make conception.

4. If after this ſhe begins to have loathings to thoſe things which ſhe loved before, and this attended with a loſs of appetite, and a deſire after meats, to which ſhe was not affected before and hath often nauſeatings and vomitings with ſour belchings and exceeding weakneſs of ſtomach.

5. After conception the belly waxeth very flat, becauſe the womb cloſeth itſelf together, to nouriſh and cheriſh the ſeed, contracting itſelf ſo as to leave no empty ſpace.

6. If the veins of the breaſt are more clearly ſeen than they were wont to be, it is a ſign of conception.

7. So it is, if the tops on the nipples look redder than formerly, and the breaſts begin to ſwell, and grow harder than uſual, eſpecially if this be attended with pain and foreneſs.

8. If a woman hath twiſting and griping pains, much like thoſe of the cramp in the belly, and about the navel, it is a ſign ſhe has conceived.

9. If under the lower eye lid the veins be ſwelled, and appear clearly, and the eye be ſomething diſcolored, it is a certain ſign ſhe is with child, unleſs ſhe have her menſes at the ſame time upon her, or that ſhe has ſat up the night before. This ſign has never failed.

10 Some alſo make this trial of conception; They ſtop the woman's urine in a glaſs or phial for three days, and then ſtrain it through a linnen cloth, and if they find ſmall living creatures in it, they conclude that the woman has certainly conceived.

11. There alſo is another eaſy trial: let the woman that ſuppoſes ſhe has conceived take a green nettle, and put it into her urine cover it cloſe, and let it remain therein a whole night: if the woman be with child it will be full of red ſpots on the morrow; but if ſhe be not with child it will be blackiſh.

12 The laſt ſign I ſhall mention is that which is moſt obvious to every woman, which is the ſuppreſſion of the terms: For after conception, nature makes uſe of that blood for the nouriſhment of the embryo, which before was caſt out by nature, becauſe it was too great in quantity. For it is an error to think that the menſtrual blood, ſimply in itſelf conſidered is bad: becauſe if a woman's body be in good temper, the blood muſt needs be good; and that it is voided monthly is becauſe it offends in quantity, but not in quality.

But though the ſuppreſſion of the terms is generally a ſure ſign of conception to ſuch perſons as have had them orderly before, yet is not the having them always a ſign there is no conception: Forasmuch as many that have been with child have had their terms, and ſome even till the fifth or ſixth month; which happens according to the woman's being more or leſs ſanguine; for if a woman has more blood than will ſuffice for the nouriſhment of the embryo, nature continues to void it in the uſual way. Whence the Experienced Midwife may learn there are few general rules which do not ſometimes admit of an exception. But this ſhall ſuffice to be ſpoken of the ſigns and prognoſtics of conception.

SECTION III.

Whether Conception be of a Male or Female.

AUTHORS give us ſeveral prognoſtics of this: Though they are not all to be truſted, yet there is ſome truth among them; The ſigns of a male child conceived are,

1. When a woman at her riſing up is more apt to ſtay herſelf upon her right hand than her left.

2 Her belly lies rounder and higher than when ſhe has conceived of a female.

3. She firſt feels the child to beat on her right ſide.

4. She carries her burden more light, and with leſs pain than when it is a female.

5 Her right nipple is redder than the left, and her right breaſt harder and more plump.

6. Her color is more clear, nor is ſhe ſo ſwarthy as when ſhe has conceived a female.

7. Obſerve a circle under her eye, which is a pale and bluiſh color; and if that under her right eye be moſt apparent, and moſt diſcolored, ſhe hath conceived a ſon.

8. If ſhe would know whether ſhe hath conceived a ſon or a daughter, let her milk a drop of her milk into a baſon of fair water; if it ſpreads and ſwims at top, it certainly is a boy; But if it is round as it drops in, and ſinks to the bottom, it is a girl.

This laſt is an infallible rule. And in all it is to be noted, that what is a ſign of a male conception, the contrary holds good of a female.

SEC. IV. *How a woman ought to order herſelf after conception.*

MY deſign in this treatiſe being brevity, I ſhall pretermit all that others ſay of the cauſes of twins; and whether there be any ſuch thing as ſuperfœtations, or a ſecond conception in woman, which is yet common enough, when I come to ſhew you how the midwife ought to proceed in the delivery of theſe women that are pregnant with them. But having already ſpoken of conception, I think it now neceſſary to ſhew how ſuch as have conceived ought to order themſelves during their pregnancy, that they may avoid thoſe inconveniences which often endanger the life of the child, and many times their own.

A woman after her conception, during the time of her being with child, ought to be looked on as indiſpoſed or ſick tho' in good health; for child bearing is a kind of nine month's ſickneſs, being all that time in expectation of many inconveniences, which ſuch a condition uſually cauſes to thoſe that are not well governed during that time; and therefore ought to reſemble a good pilot, who, when ſailing in a rough ſea and full of rocks, avoids and ſhuns the danger, if he ſteers with prudence; but if not, it is a thouſand to one but he ſuffers ſhipwreck. In like manner, a woman with child is often in danger of miſcarrying and loſing her life, if ſhe is not very careful to prevent thoſe accidents to which ſhe is ſubject all the time of her pregnancy: all which time her care muſt be double, firſt of herſelf, and ſecondly of the child ſhe goes with; for otherwiſe a ſingle error may produce a double miſchief; for if ſhe receives any prejudice, her child alſo ſuffers with her.

Let a woman therefore, after conception, obſerve a good diet, ſuitable to her temperament, cuſtom, condition and quality; and if ſhe can, let the air where ſhe ordinarily dwells be clear and well tempered, free from extremes either of heat or cold; for being too hot, it diſſipateth the ſpirits too much, and cauſeth many weaknеſſes, and by being too cold and foggy, it may bring down rheums and diſtillations on the lungs, and ſo cauſe her to cough, which by its impetuous motions forcing downwards, may make her miſcarry: She ought alſo to avoid all naufeous and ill ſmells; for ſometimes the ſtink of a candle not well put out may cauſe her to come before her time; and I have known the ſmell of charcoal to have the ſame effect. Let her alſo avoid ſmelling of rue, mint, pennyroyal, caſtor, brimſtone, &c.

But with reſpect to her diet, women with child have generally ſo great loathings, and ſo many different longings, that it is very difficult to preſcribe an exact diet for them. Only this I think adviſable, that they may uſe of thoſe meats and drinks which are to them moſt deſirable, tho' perhaps not in themſelves ſo wholeſome as ſome others, and it may not be ſo pleaſant; but this liberty muſt be made uſe of with this caution, tha;

what she so desires be not in itself absolutely unwholesome; and also that in every thing they take care of excess. But if a child bearing woman finds herself not troubled with such longings as we have spoken of, and in such quantity as may be sufficient for herself and the child which her appetite may in a great measure regulate; for it is alike hurtful for her to fast too long as to eat too much, and therefore rather let her eat a little and often, especially let her avoid eating too much at night; because the stomach, being too much filled, compresseth the diaphragm, and thereby causes difficulty of breathings. Let her meat be easy of concoction, such as the tenderest parts of beef, mutton, veal, sows, pullets, capons, pigeons and partridges, either boiled or roasted, as she likes best: new laid eggs are also very good for her; and let her put into her broths those herbs that purify it, as sorrel, lettuce, succory and burrage; for they will purge and purify the blood; Let her avoid whatsoever is hot seasoned especially pies and baked meats, which, being of hot digestion, overcharge the stomach. If she desires fish, let it be fresh, and such as is taken out of rivers and running streams. Let her eat quinces, or marmalade to strengthen her child; for which purpose sweet almonds, honey, sweet apples, and full ripe grapes, are also good. Let her abstain from all sharp, sour, bitter, salt things, and all things that tend to provoke the terms, such as garlic, onions, olives, mustard, fennel, with pepper, and all spices, except cinnamon, which in the last three months is good for her. If at first her diet be sparing as she increases in bigness let her diet be increased for she ought to consider she has a child as well as herself to nourish. Let her be moderate in her drinking; and if she drinks wine, let it be rather claret than white (which will breed good blood, help the digestion, and comfort the stomach, which is always but weakly during her pregnancy) but white wine being diuretic, or that which provokes urine ought to be avoided. Let her have a care of too much exercise, and let her avoid dancing, riding in a coach, or whatever else puts the body into violent motion, especially in her first month. But to be more particular I shall here set down rules proper for every month for the child bearing woman to order herself, from the time she has first conceived to the time of her delivery.

RULES for the first two Months.

AS soon as a woman knows or has reason to believe, she has conceived, she ought to abstain from all violent motion or exercise, whether in walking, riding on horseback, or in a coach. Let her also abstain from venery, to which, after conception, she has usually no great inclination, lest there be a mole or superfœtation; which is the adding of one embryo to another. Let her beware she lift not her arms too high, nor carry great burdens, nor repose herself on hard and uneasy seats. Let her use moderately meat of good juice and easy concoction, and let wine be neither too strong nor too sharp, but a little mingled with water; or, if she be very abstemious, she may use water wherein cinnamon is boiled. Let her avoid fastings, thirst, watching, mourning, sadness, anger and all other perturbations

of the mind. Let none preſent any ſtrange or unwholeſome things to her, not ſo much as name it, leſt ſhe ſhould deſire it, and not be able to get it, and ſo either cauſe her to miſcarry, or the child have ſome deformity on that account. Keep her belly looſe with prunes, raiſins, or manna, in her broth; and let her uſe the following electuary to ſtrengthen the womb and the child.

"Take conſerve of burrage, bugloſs, and red roſes, two ounces each; balm, citron peel, and mirobalans candied, each an ounce; extract of wood aloes a ſcruple; pearl prepared half a dram; red coral. ivory each a dram; precious ſtones each a ſcruple; candied nutmegs two drams; and with ſyrup of apples and quinces make an electuary.

Let her uſe the following Rules.

"Take pearls prepared a dram; red coral prepared and ivory each half a dram, precious ſtones, each a ſcruple; yellow citron peels, mace, cinnamon, cloves, each half a dram, ſaffron a ſcruple, wood aloes, half a ſcruple; ambergreaſe ſix drams, and with ſix ounces of ſugar, diſſolved in roſe water, make rouls." Let her alſo apply ſtrengtheners to the navel, of nutmegs, mace maſtic, made up in bags, or a toaſt dipped in mamſey, ſprinkled in powder of mint. If ſhe happens to deſire clay, chalk, or coal (as many women with child do) give her beans boiled with ſugar: and if ſhe long for any thing which ſhe cannot obtain, let her dreſently drink a large draught of pure cold water.

Rules for the Third Month

In this month and the next, be ſure to keep from bleeding; for though it may be ſafe at other times, it will not be ſo until the end of the fourth month: and yet if too much blood abound, or ſome incident diſeaſe happen, which requires evacuation, you may uſe a cupping glaſs, with ſcarification, and a little blood may be drawn from the ſhoulders and arms eſpecially if ſhe has been accuſtomed to bleed. Let her take care of lacing herſelf too ſtraightly, but give herſelf more liberty than ſhe uſed to do; for, incloſing her belly in too ſtraight a mould, ſhe hinders the infant from taking its free growth, and often makes it come before its time.

Rules for the Fourth Month

In this month you ought alſo to keep the child bearing woman from bleeding, unleſs in extraordinary caſes; but when this month is paſt, blood letting and phyſic may be permitted, if it be gentle and mild; and perhaps it may be neceſſary to prevent abortion. In this month ſhe may purge in acute diſeaſes; but purging may be only uſed from the beginning of this month to the end of the ſixth: but let her take care that in purging ſhe uſes no vehement medicine, nor very bitter, as aloes, which is an enemy to the child, and opens the mouth of the veſſels; neither let her uſe coloquintida, ſcammony, nor turbith; ſhe may uſe caſſia, manna, rhubard, agaric, and ſenna, diacidonium purgans is beſt with a little of the electuary of the juice of roſes.

Rules for the Fifth, Sixth and Seventh Months.

In thoſe months child bearing women are often troubled with coughs, heart beating, fainting, watching, pains in the loins and the hips and bleeding. The cough is from a ſharp vapor that comes to the jaws and rough artery from the terms, or from the thin part of that blood gotten into the veins of the breaſt, or fallen from the head to the breaſt: This endangers abortion, and ſtrength fails from watching; therefore purge the humors that fall from the breaſt with rhubarb and agaric, and ſtrengthening the head as in a catarrh, and give ſweet linitives as in a cough. Palpitation and fainting ariſe from a vapor that go to it by the arteries or from blood that aboundeth, and cannot get out at the womb but aſcends and oppreſſeth the heart; and, in this caſe, cordials ſhould be uſed both inwardly and outwardly. Watching is from ſharp, dry vapors that trouble the animal ſpirits; in this caſe uſe frictions, and let the woman wath her feet at bed time, and let her take ſyrup of poppies, dried roſes, emulſions of ſweet almond and white poppy ſeeds. If ſhe be troubled with pains in her loins and hips, as in theſe months ſhe is ſubject to be from the weight of her child, who is now grown big and heavy, and ſo ſtretcheth the ligaments of the womb, and parts adjacent, let her hold it up with ſwathing bands about her neck. About this time alſo the woman often happens to have a flux of blood, either at the noſe, womb, or hemorrhoids, from plenty of blood, or from the weakneſs of the child that takes it not in, or elſe from evil humors in the blood, that ſtirs up nature to ſend it forth. And ſometimes it happens that the veſſels of the womb may be broken, either by ſome violent motion, fall, cough or trouble of mind; (for any of theſe will work that effect) and this is ſo dangerous, that in ſuch a caſe the child cannot be well; but if it be from blood only, the danger is no leſs, provided it flows by the veins of the neck of the womb, for then it prevents plethory, and takes away the nouriſhment of the child; but if it proceeds from the weakneſs of the child that draws it not, abortion of the child often follows, or hard travail, or elſe ſhe goes beyond her time: But if it flows by the inward veins of her womb, there is more danger by the openneſs of the womb, if it comes from evil blood; the danger is alike from cacochimy, which is like to fall upon both. If it ariſes from plethory, open a vein, but with very great caution, and give her aſtringents ſuch as the following; "Take pearl prepared a ſcruple; red coral two ſcruples, mace, nutmegs each a dram; cinnamon, half a dram; make a powder, or with ſugar, rouls," Or, give this powder in broth: "Take red coral a dram; precious ſtones half a ſcruple: red ſaunders half a dram; ſealed earth, and tormentil roots, each two ſcruples, with ſugar of roſes, and manus Chriſti, with pearl five drams, make a powder." You may alſo ſtrengthen the child at the navel; and if there be a cacochim, after the humors, and evacuate, if you may do it ſafely; you may likewiſe uſe amulets on her hands and about her neck. In a flux of hemorrhoids, let her drink hot wine with a toaſted nutmeg. In theſe months the belly is alſo ſubject to be bound; but if it be without any

apparent diſeaſe, the broth of a chicken, or of veal ſodden with oil, or with the decoction of mallows, mercury, and linſeed put up in a clyſter, will not be amiſs, but in leſs quantity than is given in other caſes; to wit of the decoction five ounces, of common oil three ounces, of ſugar two ounces, of caſſia fiſtula one ounce. But if ſhe will not take a clyſter, one or two yolks of new laid eggs; or a few peaſe pottage warm, with a little ſalt and ſugar, ſupped up a little before meat, will be very convenient: But if her belly ſhall be diſtended, and ſtretched out with wind, a little fennel ſeed and anniſeed reduced into powder, and mingled with honey and ſugar, made after the manner of an electuary, will do very well. Alſo, if the thighs and feet ſwell, let them be anointed with oxphrodium (which is a liquid medicine made with vinegar and roſe water) mingled with a little ſalt.

Rules for the Eighth Month.

The eighth is commonly the moſt dangerous and therefore the greateſt care and caution ought to be uſed; and her diet ought to be better in quality, but not more, nor indeed ſo much in quantity as before; but as ſhe muſt abate her diet, ſo ſhe muſt increaſe her exerciſe: And becauſe then women with child, by reaſon of the ſharp humors, alter the belly, are accuſtomed to weaken their ſpirits and ſtrength, they may well take before meat an electuary of diarrhodon or aromaticum, roſatum, or diamargarton; and as they will loath and naufeate their meat they may take green ginger condited with ſugar, or the rinds of citrons and oranges condited; and often uſe honey for the ſtrengthening of the infant. When ſhe is not far from her labor, let her uſe every day ſeven roaſted figs before meat and ſometimes lick a little honey; but let her beware of ſalt and powder meat, for it is neither good for her nor her child.

Rules for the Ninth Month.

In the ninth month, let her have a care of lifting any great weight; but let her move a little more to dilate the parts, and ſtir up natural heat. Let her take heed of ſtooping, neither ſit too much nor lie on her ſides; neither ought ſhe to bend herſelf much, leſt the child be unfolded in the umbillicul ligament, by which means it often periſhes. Let her walk and ſtir often, and let her exerciſe be rather to go upwards than downwards; Let her diet now eſpecially be light and eaſy of digeſtion: as damask prunes with ſugar or figs, and raiſins, before her meat, as alſo the yolk of eggs, fleſh and broth of chickens, birds, partridges, and pheaſants; aſtringent and roaſted meats, with rice and hard eggs, millet, and ſuch like other things are proper; baths of ſweet water, with emolient herbs, ought to be uſed by her this month without intermiſſion. And after the bath, let her belly be annointed with oil of roſes and violets; but for her privy parts, it is fitter to annoint them with the fat of hens, geeſe, or ducks, or with oil of lilies, and the decoction of linſeed and fenugreek, boiled with oil of linſeed and marſhmallows, or with the following liniment.

"Take of mallows and marſhmallows, cut and ſhred, of each an ounce; of linſeed one ounce; let them be boiled from twen-

ty ounces of water to ten; then let her take three ounces of boiled broth: of oil of almonds, and oil of flourdeluce, of each one ounce; of deer's fuet three ounces; let her bathe with this, and annoint herſelf with it warm."

If for fourteen days before the birth ſhe do every morning and evening bathe and moiſten her belly with muſcadel and lavender water, the child will be much ſtrengthened thereby. And if every day ſhe eat toaſted bread, it will hinder any thing from growing to the child. Her privy parts may be alſo gently ſtroaked down with this fomentation.

"Take three ounces of linſeed; of mallows and marſhmallows ſliced, of each one handful: let them be put into a bag, and boiled immediately: and let the woman with child every morning and evening take the vapor of this decoction in a hollow ſtool, taking great heed that no wind nor air come to her in any part, and let her wipe the part ſo annointed, with a linen cloth, that ſhe may annoint the belly and groins as at firſt. When ſhe is come ſo near her time as to be within 10 or 14 days thereof, if ſhe begins to feel any more than ordinary pain, let her uſe every day the following

"Take mallows, and marſhmallows, of each one handful: camomile, herd mercury, maiden hair, of each half a handful: of linſeed four ounces: let them be boiled in ſuch a ſufficient quantity of water as may make a broth therewith" But let her not ſit too hot upon the ſeat, nor higher than a little above her navel; nor let her ſit on it longer than about half an hour, leſt her ſtrength languiſh and decay, for it is better to uſe it often, than to ſtay too long in it. And thus I have ſhewn how a child bearing woman ought to govern herſelf in each month during her pregnancy. How ſhe muſt order herſelf at her delivery, ſhall be ſhewn in another chapter, after I have firſt ſhewn the induſtrious Midwife how the child is formed in the womb, and the manner of its decumbiture there.

CHAP. I.

Of the Parts proper for the Child in the Womb; how it is formed there, and the manner of its ſituation therein.

IN the laſt chapter I ſhewed what conception was, how accompliſhed, its ſigns and how ſhe who hath conceived ought to order herſelf during the time of her pregnancy. Now, before I ſpeak of her delivery, it is neceſſary that the midwife be firſt acquainted with the parts proper to a child in the womb, and alſo how it is formed and the manner of its ſituation and decumbiture there; without the knowledge of which, no one can tell how to deliver a woman as ſhe ought. This therefore ſhall be the work of this chapter. I ſhall begin with the firſt of theſe.

SECTION I. *Of the parts proper to a Child in the Womb.*

IN this ſection I muſt firſt tell you what I mean by the parts proper to a child in the womb, and they are only thoſe that either help or nouriſh it, whilſt it is lodged in that dark repoſitory of nature, and that help to clothe and defend it there, and are caſt away, as of no more uſe after it is born, and theſe are two, viz. the umbilicum, or navel veſſels, and the ſe-

cundum, by the firſt it is nouriſhed, and by the ſecond clothed and defended from wrong. Of each of theſe I ſhall ſpeak diſtinctly, and, firſt,

Of the Umbilicum or Navel Veſſels.

Theſe are four in number, viz. one vein, two arteries, and the veſſel which is called urachos: 1 The vein is that by which the infant is nouriſhed, from the time of its conception, to the time of its delivery; till being brought into the light of this world, it has the ſame way of concocting its food that we have. This vein arriſeth from the liver of the child, and is divided into two parts when it hath paſſed the navel; and theſe two are again divided, and ſubdivided, the branches being upheld by the skin called chorion (of which I ſhall ſpeak by and by) and are joined to the veins of the mother's womb, from thence they have their blood for the nouriſhment of the child. 2. The arteries are two on each ſide, which proceed from the back branches of the great artery of the mother; and the vital blood is carried by theſe to the child, being ready concocted by the mother. 3 A nervous or ſinewy production is led from the bottom of the bladder of the infant to the navel, and this is called urachos; and its uſe is to convey the urine of the infant from the bladder to the alantois. Anatomiſts do very much vary in their opinions concerning this; ſome denying any ſuch thing to be in the delivery of women, and others affirming it: but experience teſtifies there is ſuch a thing: For Bartholomew Cabrolios, the ordinary doctor of anatomy to the college of phyſicians at Montpelier in France, records the hiſtory of a maid, whoſe water being a long time ſtopped, at laſt iſſued out thro' her navel; And Johannes Fernelius ſpeaks of the ſame thing that happened to a man of thirty years of age, who having a ſtoppage in the neck of the bladder, his urine iſſued out of his navel many months together, without any prejudice at all to his health, which he aſcribes to the ill lying of his navel, whereby the urachos was not well dried. And Volchier Coitas quotes another ſuch in a maid of thirty four years, at Nuremberg in Germany. Theſe inſtances, though they happen but ſeldom, are ſufficient to prove that there is ſuch a thing as an urachos in men. Theſe four veſſels before mentioned, viz. one vein, two arteries, and the urachos do join near to the navel, and are united by a skin which they have from the chorion, and ſo become like a gut rope, and are altogether void of ſenſe; and this is that which the good women call the navel ſtring. The veſſels are thus joined together, that ſo they may neither be broken, ſevered, nor entangled: and when the infant is born, are of no uſe, ſave only to make up the ligament, which ſtops the whole of the navel and ſome other phyſical uſe, &c.

Of the Secundine or After Birth.

Setting aſide the name given to this day, by the Greeks and Latins, it is called in Engliſh by the name of Secundine, After birth, and After burden, which are held to be four in number.

1. The firſt is called Placenta, becauſe it reſembles the form of a cake, and is knit both to the navel and chorion, and makes up the greateſt part of the ſecundine or after birth. The fleſh

of it is like that of the milt, or ſpleen, ſoft, red, and tending ſomething to blackneſs, and hath many ſmall veins and arteries in it; and certainly the chief uſe of it is for containing the child in the womb.

2 The ſecond is the Chorion. This ſkin, and that called the Amnios, involve the child, round, both above and underneath, and on both ſides, which the Alantois doth not: This ſkin is that which is moſt commonly called the ſecundine, as it is thick and white, garniſhed with many ſmall veins and arteries, ending in the Placenta, before named, being very light and ſlippery. Its uſe is not only to cover the child round about, but alſo to receive and ſafely bind up the roots and the veins and arteries, or navel veſſels before deſcribed.

3. The third thing which makes up the ſecundine, is the Alantois, of which there is a great diſpute among anatomiſts; ſome ſaying there is ſuch a thing and others that there is not; Thoſe that will have it to be a membrane, ſay, it is white, ſoft, and exceeding thin, and juſt under the placenta, where it is knit to the Urachos, from whence it receives the urine and its office is to keep it ſeparate from the ſweat, that the ſaltneſs of it may not offend the tender ſkin of the child.

4. The fourth and laſt covering of the child is called Amnois, and it is white, ſoft, and tranſparent, being nouriſhed by ſome very ſmall veins, and arteries. Its uſe is not only to enwrap the child round, but alſo to retain the ſweat of the child

Having thus deſcribed the parts proper to the child in the womb, I will next proceed to ſpeak of the formation of the child therein, as ſoon as I have explained the hard terms in this ſection, that thoſe for whoſe help this is deſigned, may underſtand what they read. There is none ſo ignorant as not to know that a vein is that which receives blood from the liver, and diſtributes it in ſeveral branches to all parts of the body. Arteries proceed from the heart, are in continual motion, and by that motion quicken the body. Nerve is the ſame with ſinew, and is that by which the brain adds ſenſe and motion to the body. Placenta properly ſignifies a ſugar cake: but in this ſection it is uſed to ſignify a ſpungy piece of fleſh, reſembling a cake full of veins and arteries, and is made to receive the mother's blood, appointed for the infant's nouriſhment in the womb. Chorion is the outward ſkin which compaſſeth the child in the womb. The amnois is the inner ſkin which compaſſeth the child in the womb. The Alantois is the ſkin that holds the urine of the child during the time that it abides in the womb. The Urachos is the veſſel that conveys the urine from the child in the womb to the Alantois. I now proceed to

SECTION II.

Of the formation of the Child in the Womb.

TO ſpeak of the formation of the child in the womb, we muſt begin where nature begins; and that is, at the act of coition, in which the womb having received the generative ſeed without which there can be no conception, the womb immediately ſhuts up itſelf ſo cloſe that not the point of a needle can enter the inward orifice; and this it does partly to hinder the

iſſuing out of the ſeed again, and partly to cheriſh it by the inbred heat, the better to provoke it to action; which is one reaſon why women's bellies are ſo lank at their firſt conception. The women having thus conceived, the firſt thing which is operative in the conception, is the ſpirit, whereof the ſeed is full, which, nature, quickening by the heat of the womb, ſtirs it up to action. This ſeed conſiſts of very different parts, of which ſome are more, and ſome are leſs pure. The internal ſpirits therefore ſeparateth thoſe parts that are leſs pure; which are thick, cold, and clammy, from them that are more pure and noble. The leſs pure are caſt to the outſides, and with them the ſeed is circled round, and of them the membranes are made, in which that ſeed which is the moſt pure is wrapped round, and kept cloſe together, that it may be defended from cold and other accidents, and operate the better.

The firſt that is formed is the amnois, the next the chorion, and they enwrap the ſeed round as it were a curtain. Soon after this (for the ſeed thus ſhut up in the woman lies not idle) the navel vein is bred, which pierceth thoſe ſkins, being yet very tender and carries a drop of blood from the veins of the mother's womb to the ſeed; from which drop is formed the liver, from which liver there is quickly bred the vena cava or chief vein, from which all the reſt of the veins that nouriſh the body ſpring; and now the ſeed hath ſomething to nouriſh it, whilſt it performs the reſt of nature's work, and alſo blood adminiſtered to every part of it to form fleſh.

This vein being formed, the navel arteries are ſoon after formed, then the great artery, of which all others are but branches, and then the heart; for the liver furniſheth the arteries with blood to form the heart, the arteries being made of ſeed, but the heart and the fleſh of blood. After this the brain is formed, and then the nerves, to give ſenſe and motion to the infant. Afterwards the bones and fleſh are formed, and of the bones, firſt the vertebræ or chine bones, and then the ſkull, &c.

As to the time in which this curious part of nature's workmanſhip is formed, phyſicians aſſign four different ſeaſons wherein this microcoſm is formed, and its formation perfected in the womb: The firſt is immediately after coition; the ſecond time of forming, ſay they, is when the womb by the force of its own innate power and virtue makes a manifeſt mutation or coagulation in the ſeed, ſo that all the ſubſtance thereof ſeems coagulated fleſh and blood, which happens about the twelfth or fourteenth day after copulation and though this concretion of fleſhy maſs abounds with ſpirits, yet it remains undiſtinguiſhable without any form and may be called a rough draught of the fœtus or embryo. The third time in which this fabric is come to ſome further maturity is, when the principal parts may be in ſome meaſure diſtinguiſhed, and one may diſcern the liver, umbellical veins, arteries, nerves, brain, and heart: and this is about eighteen days after conception. The fourth and laſt time aſſigned by phyſicians for the formation of the child, is about the 30th day after conception for a male, but for a female, they tell us forty two

or forty five days are required, though for what reaſon I know not, nor does it appear by the birth: for if the male receives its formation fifteen days ſooner than the female, why ſhould it not be born ſo much ſooner too. But as to that, every day's experience ſhews us the contrary; for women go the full time of nine months both with male and female. But at this time of 30 days(or ſome will have it 45)the outward parts may be alſo ſeen exquiſitely elaborate, and diſtinguiſhed by joints; and from this time the child begins to be animated though as yet there is no ſenſible motion; and has all the parts of the body, though ſmall and very tender, yet entirely formed and figured, altho' not longer in the whole than one's middle finger: and from thence forward, the blood flowing every day more and more to the womb, not by intervals like their courſes, but continually, it grows bigger and ſtronger to the end of nine moths, being the full time of a woman's ordinary labor.

Very great have been the diſputes among both philoſophers and phyſicians about the nouriſhment of the child in the womb, both as to what it is, and which way it receives it. Almæon was of opinion that the infant drew in its nouriſhment by its whole body, becauſe it is rare and ſpungy, as a ſponge ſucks in water on every ſide; and ſo he thought the infant ſucked blood not only from its mother's veins, but alſo from the womb. Democritus held that the child ſucked in the nouriſhment at its mouth. Hypocrates affirms that the child ſucks in both nouriſhment and breath by its mouth from the mother, for which he gives two reaſons: 1. That it will ſuck as ſoon as it is born, and muſt have learnt to ſuck before. 2. Becauſe there are excrements found in the guts as ſoon as it is born. But neither of theſe reaſons are ſufficient to prove his aſſertion; for as to the firſt, "That the child will ſuck as ſoon as it is born" it is from natural inſtinct; for take a young cat that never ſaw her dam catch a mouſe, and yet ſhe will catch mice herſelf as ſoon as ſhe is able. And as to his ſeccond reaſon, it is a ſufficient anſwer to ſay, that the excrements found in the guts of an infant new born are not excrements of the firſt concoction, which is evident becauſe they don't ſtink, but are the thickeſt part of the blood, which is conveyed from the veſſels of the ſpleen to the guts. Having therefore ſaid enough to confute the opinion of the child's receiving nouriſhment by the mouth, I do affirm that the child receives its nouriſhment in the womb by the navel, and, that it ſhould be ſo, is much more conſonant to truth and reaſon; which, being granted, it will eaſily follow that the nouriſhment the child receives is pure blood conveyed into the liver by the navel vein, which is a branch of the vena porta, or great vein, and paſſes to the ſmall veins of the liver. Here this blood is made moſt pure, and the thicker and rawer part of it is conveyed to the ſpleen and kidneys, and the thick excrement of it to the guts, which is that excrement found there ſo ſoon as they are born. The pure part is conveyed to the vena cava, and by it diſtributed throughout the body by the ſmall veins, which like ſo many ſmall rivulets, paſs to every part of it. This

blood is accompanied (as all blood is) with a certain watery ſubſtance, the better to convey it through the paſſage it is to run in, which as in men, is breathed out by ſweating, and contained in the amnios, as I have already ſaid.

SECTION III.

Of the Manner of the child's lying in the womb.

I COME now to ſhew after what manner the child lies in the womb, a thing ſo eſſential for a midwife to know that ſne can be no midwife who is ignorant of it; and yet, even about this authors extremely differ; for there is not two in ten that agree what is the form that the child lies in the womb, or in what fa.hion it lies there; and this may ariſe in a great meaſure from the different figures that the child is found in according to the different times of the woman's pregnancy; for near the time of its deliverance out of thoſe winding chambers of nature, it oftentimes changes the form in which it lay before, for another. Hippocrates affirms the child is ſo placed in the womb as to have its hands, its knees, and its head bent down towards its feet, ſo that it lies round together, its hands upon both its knees, and its face between them; ſo that each eye toucheth each thumb, and its noſe betwixt his knees: And Bartholinus was alſo of the ſame opinion. Columbus deſcribes the poſture of the child thus, "The right arm bowed, the fingers were under the ear and above the neck; the head bowed down, ſo that the chin toucheth the breaſt, the left arm bowed above both breaſt and face, and the left arm is proped up by the bending of the right elbow, the legs are lifted up ſo that the thigh toucheth the belly, the knees the navel, the heel, the left buttock, and the foot is turned back and covereth the ſecrets; the left thigh toucheth the belly, and the leg is lifted up to the breaſt, the back lying outward. And thus much ſhall ſuffice concerning the opinion of authors.

I will now ſhew the ſeveral ſituations of the child in the womb according to the different times of pregnancy, by which thoſe that are contrary to nature, and are the chief cauſe of all labors, will be more eaſily conceived by the underſtanding midwife: It ought therefore, in the firſt place, to be obſerved that the infants, as well male as female, are generally ſituated in the midſt of the womb; for though ſometimes to appearance a woman's belly ſeems higher on one ſide than on the other yet it is ſo with reſpect to her belly only, and not of her womb, in the midſt of which it is always placed

But in the ſecond place a woman's great belly makes different figures, according to the different times of pregnancy; for when ſhe is young with child, the embryo is always found of a round figure a little oblong, having the ſpine moderately turned inwards, the thighs folded, and a little raiſed, to which the legs are ſo joined that the heels touch the buttocks: The arms are bending, and the hands placed upon the knees: towards which the head is inclining forwards, ſo that the chin toucheth the breaſt: in which poſture it reſembles one's ſitting to eaſe nature and ſtooping down with the head to ſee what comes from him. The ſpine of its back is at that time placed towards the moth-

er's and the head uppermoſt, the face forwards, and the feet downwards; proportionably to its growth, it extends its members by little and little, which were exactly folded the firſt month. In this poſture it uſually keeps till the ſeventh month, and then by a natural propenſity and diſpoſition of the upper part of the body, the head is turned downwards towards the inward orifice of the womb, tumbling as if it were over its head, ſo that then the feet are uppermoſt, and the face towards the mother's great gut; and this turning of the infant in this manner, with his head downwards, towards the latter end of a woman's reckoning is ſo ordered by nature, that it may thereby be the better diſpoſed for its paſſage into the world at the time of its mother's labor which is then not far off; (and indeed ſeveral children turn not at all until the very time of birth) for in this poſture all its joints are moſt eaſily extended in coming forth; for by this means the arms and legs cannot hinder its birth, becauſe they cannot be bended againſt the inward orifice of the womb; and the reſt of the body, being very ſupple, paſſeth without any difficulty after the head, which is hard and big, being paſt the birth. It is true, there are divers children that lie in the womb in another poſture, and come to the birth with their feet downwards, eſpecially if there be twins; for then by their different motions they ſo diſturb one another, that they ſeldom come both in the ſame poſture at the time of labor, but one will come with the head, and another with the feet, or perhaps, lie acroſs, and ſometimes one of them will come right. But however the child may be ſituated in the womb, or to whatever poſture it preſents itſelf at the time of birth, if it be not with its head forwards, as I have before deſcribed, it is always againſt nature; and the delivery will occaſion the mother more pain and danger, and require greater care and ſkill from the midwife than when the labor is more natural.

CHAP. IV.

A Guide for Women in travail ſhewing what is to be done when they fall in Labor, in order for their Delivery.

THE end of all that we have been treating of, is the bringing forth of a child into the world with ſafety both to the mother and to the infant. The whole time of the woman's pregnancy may very well be termed a kind of labor; for, from the time of her conception, to the time of her delivery, ſhe labors under many difficulties, is ſubject to many diſtempers, and in continual danger, from one cauſe or another, till the time of birth comes, and when that comes, the greateſt labor and travail comes along with it, inſomuch, that then all her others are forgotten, and that only is called the time of her labor; and to deliver her ſafely is the principal buſineſs of the midwife. To aſſiſt her herein is the chief deſign of this chapter. The time of the child's being ready for its birth, when nature endeavors to caſt it forth, is that which is properly the time of a woman's labor. And ſince many women, eſpecially of their firſt child, are often miſtaken in their reckoning, and ſo, when they draw near their time, take every pain they meet with for the labor, when it is not ſo, which often proves prejudicial and troubleſome to

them, I will in the first section of this chapter, set down some signs, by which a woman may know when the true time of her labor is come.

SECT. I *Signs of the true Time of a Woman's Labor.*

WHEN women with their first child, percive any extraordinary pains in their belly, they immediately send for their midwife, taking it for their labor; and then if the midwife be not a skilful and judicious woman, she will, without further inquiry, take it for granted, and so go about to put her into labor before nature is prepared for it: which may endanger the life both of the mother and child, by breaking the amnois and chorion. These pains, which are often mistaken for labor, are removed by warm clothes laid on the belly, and the application of a clyster or two, by which those pains which precede a true labor are rather furthered than hindered. There are also other pains incident to women in that condition from a flux in the belly, which are easily known by the frequent stools which follow them.

The signs therefore of labor some few days before are, that the woman's belly, which before lay high, sinks down, and hinders her from walking so easily as she used to do; also, there flows from the womb slimy humors, which nature has appointed to moisten and smooth the passage, that its inward orifice may be the more easily dilated when there is occasion; which beginning to open at that time, suffers that slime to flow away, which Proceeds from the glandules called Prostratæ. These are signs preceding labor; but when she is presently falling into labor, the signs are great pains about the region of the reins and loins, which, coming and reiterating by intervals, answer to the bottom of the belly by congruous throes, and sometimes the face is red and inflamed, the blood being much heated by the endeavors a woman makes to bring forth her child, and likewise because during these strong throes her respiration is intercepted, which causes the blood to have recourse to her face; also her privy parts are swelled by the infant's head lying in the birth, which by often thrusting, causes those pains to descend outwards. She is much subject to vomiting, which is a sign of good labor and speedy delivery, though by ignorant women thought otherwise, for good pains are thereby excited and redoubled; which vomiting is occasioned by the sympathy there is between the womb and the stomach. Also, when the birth is near, women are troubled with a trembling in the thighs and legs, not with cold, like the beginning of an ague fit, but with the heat of the whole body, though this does not always happen. When the humors which flow from the womb are discolored with blood, the midwives call it Shows, and it is an infallible mark of the birth's being near: and if then the midwife put up her finger into the neck of the womb she will find the inner orifice dilated: at the opening of which, the membranes of the infant containing the waters present themselves, and are strongly forced downwards with each pain she hath; at which time one may perceive them sometimes to resist and then again press forward the finger, being more or less hard and extended,

according as the pains are ſtronger or weaker. Theſe membranes, with the waters in them, when they are before the head of the child, which the midwives call the Gathering of the Waters, reſemble, to the touch of the finger, thoſe eggs which have no ſhell, but are covered only with a ſingle membrane. After this, the pains ſtill redoubling, the membranes are broken by a ſtrong impulſion of the waters, which preſently flow away, and then the head of the infant is preſently felt naked, and preſents itſelf at the inward orifice of the womb: When theſe waters come thus away, then the midwife may be aſſured the birth is very near, this being the moſt certain ſign that can be; for the Amnois and lantois being broked, which contain thoſe waters, by preſſing forward of the birth; the child is not better able to ſubſiſt long in the womb afterwards, than a naked man in a heap of ſnow. Now, theſe waters, if the child comes preſently after them, facilitate the labor, by making the paſſage ſlippery; and therefore let no midwife (as ſome have fooliſhly done) endeavor to force away the water, for nature knows beſt when the true time of the birth is, and therefore retains the water till that time. But if by accident the water breaks away too long before the birth, then ſuch things as will haſten it, may be ſafely admitted; and what thoſe are I ſhall ſhew in another ſection

SECTION II.

How a Woman ought to be ordered when the Time of Labor is come.

WHEN it is known that the time of a woman's labor is come, by the ſigns laid down in the foregoing ſection, of which thoſe that are moſt to be relied on are pains and ſtrong throes in the belly, forcing downwards towards the womb, and a dilation of the inward orifice, which may be perceived by touching it with the finger, and gathering of the waters before the head of the child, and thruſting down of the membranes which contain them; through which, between the pains, one may with the finger diſcover the part which preſents as ſaid before eſpecially if it be the head of the child, by its roundneſs and hardneſs. If theſe things concur, and are evident, the midwife may be ſure it is the time of her labor; and care muſt be taken to get all things ready that are neceſſary to comfort the woman in that time. And the better to help her, be ſure to ſee ſhe be not ſtraight laced: You may alſo give her a pretty ſtrong clyſter, or more, if there be occaſion, provided it be done at the beginning, and before the child be too forward. The benefit accruing hereby will be, to excite the gut to diſcharge itſelf of its excrements, that ſo the rectum being emptied, there may be more ſpace for the dilation of the paſſage; likewiſe to cauſe the pains to bear the more downward; through the endeavors ſhe makes when ſhe is at ſtool: and, in the mean time, all other neceſſary things for her labor ſhould be put in order, both for the midwife and the child. To this end ſome get a midwife's ſtool, but a pallet bed girted is much the beſt way, placed near the fire, if the ſeaſon ſo require: Which pallet ought to be ſo placed, that there may be eaſy acceſs to it on ev-

ery ſide, that the woman may be the more readily aſſiſted, as there is occaſion.

If the woman abounds with blood, to bleed her a little may not be improper, for thereby ſhe will both breathe the better, and have her breaſts more at liberty, and likewiſe more ſtrength to bear down the pain; and this ſhe may do without danger, becauſe the child being about that time ready to be born, has no more need of the mother's blood for its nouriſhment: Beſides, this evacuation does many times prevent her having a fever after her delivery. Alſo, before her delivery, if her ſtrength will permit, let her walk up and down her chamber; and that ſhe may have ſtrength ſo to do, it will be neceſſary to give her ſome good ſtrengthening things, ſuch as jelly broth, new laid eggs, or ſome ſpoonfuls of burnt wine. And let her, by all means, hold out her pains, bearing them down as much as ſhe can at the time when they take her; and let the midwife from time to time touch the inward orifice with the finger, to know whether the waters are ready to break, and whether the birth will follow ſoon after; let her alſo anoint the woman's privities with emollient oil, hog's greaſe, and freſh butter, if ſhe finds they are hard to be dilated. Let the midwife be all the while near the laboring woman, and diligently obſerve her geſtures, complaints, and pains, for by this ſhe may gueſs pretty well how her labor advanceth; becauſe when ſhe changeth her ordinary groans into long cries, it is a ſign the child is very near the birth; for at that time the pains are greater and more frequent. Let the woman likewiſe by intervals reſt herſelf on the bed to regain her ſtrength, but not too long, eſpecially if ſhe be little, ſhort and thick, for ſuch women have always worſe labor, if they lie long on their beds in their travail; it is better, therefore that they walk, as much as they can, about the chamber, the women ſupporting her under their arms, if it be neceſſary, for by this means the weight of the child cauſeth the inward orifice of the womb to dilate ſooner than in bed; and if her pains be ſtronger and more frequent, her labor will not be near ſo long.

Let not the laboring woman be concerned at thoſe qualms and vomitings perhaps which ſhe may find come upon her, for they will be much to her advantage in the iſſue, however uneaſy ſhe may be for the time, as they further the throes and pains, provoking downwards. But to proceed:

When the waters of the children are ready and gathered, which may be perceived through the membranes to preſent themſelves to the inward oriſice, of the bigneſs of the whole dilation, the midwife ought to let them break of themſelves, and not, like ſome haſty midwives, who being impatient of the woman's long labor, break them, intending thereby to haſten their buſineſs, when inſtead thereof, they retard it; for, by the too haſty breaking of theſe waters (which Nature deſigned to cauſe the infant to ſlide forth the more eaſily) the paſſage remains dry, by which means the pains and throes of the laboring woman are leſs efficacious to bring forth the infant than they would otherwiſe have been. It is therefore much the better

way to let the waters break of themſelves: after which the midwife may with eaſe feel the child bare by that which firſt preſents, and thereby diſcern whether it comes right, that is, with the head foremoſt, for that is the moſt proper and natural way of its birth; if the head comes right, ſhe will find it round, big, hard, and equal; but if it be in any other part, ſhe will feel it unequal, rugged, and ſoft or hard, according to the nature of the part it is. And this being the true time when the woman ought to deliver, if nature be not wanting to perform its office, therefore when the midwife finds the birth thus coming forward, let her haſten to aſſiſt and deliver it, for it ordinarily happens ſoon after, if it be natural.

But if it happens as ſometimes it may, that the waters break away too long before the birth, in ſuch a caſe thoſe things that haſten nature may be ſafely admitted; to which purpoſe, let her make uſe of pennyroyal, dittany, juniper berries, red coral, betony, and feverfew boiled in white wine, and a draught of it drank; or it would be much better to take the juice of it when it is in its prime, which is in May, and having clarified it, let them make it into a ſyrup, with double its weight of ſugar, and keep it by them all the year to uſe when occaſion calls for it. Mugwort, uſed in the ſame manner, is alſo good in this caſe. Alſo a dram of cinnamon powder given inwardly profits much in this caſe: and ſo does tanſey bruiſed and applied to the privities, or an oil of it ſo made and uſed as you were taught before. The ſtone Ætites held to the privities is of extraordinary virtue, and inſtantly draws away both child and after burden, but great care muſt be taken to remove it preſently, or it will draw forth the womb and all; for ſuch is the magnetic virtue of this ſtone, that both child and womb follow it as readily as iron doth the loadſtone, or as the load ſtone the North ſtar.

There are many other things that phyſicians affirm are good in this caſe among which are, an aſs's or an horſe's hoof hung near the privities; a piece of red coral hung near the ſaid place; a load ſtone helps much held in the woman's left hand, or the ſkin which a ſnake hath cut off, girt about the middle next the ſkin. Theſe things are mentioned by Mizaldus; but ſetting thoſe things aſide as not ſo certain, notwithſtanding, Mizaldus quotes them, the following preſcriptions are very good to give ſpeedy deliverance to women in travail

1. A decoction of white wine made in ſavory, and drank.

2. Take wild tanſey, or ſilver weed, bruiſe it, and apply it to the woman's noſtrils.

3. Take date ſtones, and beat them to powder, and let her take half a dram of them in white wine at a time.

4. Take parſley, and bruiſe it, and preſs out the juice, and dip a linen cloth in it, and put it up ſo dipped into the mouth of the womb, it will preſently cauſe the child to come away though it be dead, and will bring away the after burden. Alſo the juice of parſley is a thing of ſo great virtue (eſpecially ſtone parſley) being drank by a woman with child, it cleanſeth not only the womb, but alſo the child in the womb, of all groſs humors.

5. A ſcruple of caſtorum in powder, in any convenient liquor, is very good to be taken in ſuch caſe; and ſo alſo is two or three drops of ſpirit of caſtorum in any convenient liquor: alſo eight or nine drops of ſpirit of myrrh, given in any convenient liquors gives ſpeedy deliverance.

6. Give a woman in ſuch a caſe another woman's milk to drink it will cauſe ſpeedy delivery, and almoſt without any pain.

7. The juice of leeks, being drank with warm water, hath a mighty operation to cauſe ſpeedy delivery.

8. Take piony ſeeds, and beat them into powder, and mix the powder with oil, with which oil anoint the loins and privities of the woman with child; it gives her deliverance very ſpeedily, and with leſs pain than can be imagined.

9. Take a ſwallow's neſt, and diſſolve it in water, ſtrain it, and drink it warm: it gives delivery with great ſpeed and much eaſe.

Note, this alſo is general, that all things that move the terms are good for making the delivery eaſy; ſuch as myrrh, white amber in white wine, or lily water, two ſcruples or a dram; or caſſia lignea, dittany, each a dram, cinnamon half a dram, ſaffron a ſcruple, give a dram; or take borax mineral a dram, caſſia lignea a ſcruple, ſaffron ſix grains, and give it in ſack; or take caſſia lignea a dram dittany, amber of each, half a dram, cinnamon, borax, of each a dram and a half, ſaffron a ſcruple, and give her half a dram; or give her ſome drops of hazel in a convenient liquor; or two or three drops of oil of cinnamon in vervain water. Some prepare the ſecundine thus; Take the naval ſtring and dry it in an oven; take two drams of the powder, cinnamon a dram, ſaffron half a ſcruple, with juice of ſavin make troches; give two drams; or waſh the ſecundine in wine and bake it in a pot; then waſh it in endive water and wine; take half a dram of it; long pepper, galangal, of each half a dram; plantain and endive ſeed, of each a dram and a half; lavender ſeed four ſcruples; make a powder; or take laudanum two drams, ſtorax, calamine, benzoin, of each half a dram; muſk, ambergreaſe, each ſix grains; make a powder, or troches for a fume. Or uſe peſſaries to provoke the birth; take galbanum, diſſolved in vinegar, an ounce; myrrh two drams; ſaffron a dram; with oil of orts make a peſſary.

An Ointment for the Navel.

Take oil of kier two ounces, juice of ſavin an ounce, of leeks and mercury, each half an ounce; boil them to the conſumption of the juice; and galbanum diſſolved in vinegar half an ounce, myrrh two drams, ſtorax liquid a dram; round birth wort, ſowbread, cinnamon, ſaffron, a dram; with wax make an ointment and apply it.

If the birth be retarded through the weakneſs of the mother, refreſh her with applying wine and ſoap to the noſe, Confect Alkermas Diamarg.

Theſe things may be applied to help nature in the delivery when the child comes to the birth the right way, and yet the birth is retarded; but if ſhe finds the child comes the wrong way, and ſhe is not able to deliver the woman as ſhe ought to

be, by helping nature and saving both mother and child (for it is not enough to lay a woman, if it might be done by another with more safety and ease, and less hazard both to woman and child) then let her send speedily for better and more able help; and not as I once knew a midwife, when a woman she was to deliver had hard labor, rather than a man midwife should be sent for, would undertake to deliver the woman herself (though told by others that it was a man's business) and in her attempting it brought away the child, but left the head of the infant behind in the mother's womb; and had not a man midwife been presently sent for, the mother had lost her life as well as the child; such persons may rather be termed butchers than midwives. But supposing the woman's labor to be natural, I will next shew what the midwife ought to do in order to her delivery.

CHAP. V.

Of natural Labor; what it is, and what the Midwife is to do in such a Labor.

Section I. *What natural Labor is.*

THERE are four things to denominate a woman's labor natural; the first is, that it be at the full time; for if a woman comes before her time it cannot properly be termed natural labor, neither will it be so easy as if she had completed her nine months. The second thing is, that it be speedy and without any ill accident; for when the time of the birth is come, nature is not dilatory in the bringing of it forth, without some ill accident intervene which renders it unnatural. The third is, that the child be alive: for all will grant, that the being delivered of a dead child is very unnatural. The fourth thing requisite to a natural birth is that the child come right; for if the position of the child in the womb be contrary to what is natural, and the event proves it so too often, making that which should be a time of life the death both of the mother and the child.

Having thus told you what I mean by natural labor, I shall next shew how the midwife is to proceed here, in order to the woman's delivery. When all the foregoing requisites concur, and after the waters are broke of themselves, let the laboring woman be conducted to a pallet bed, provided near the fire for that purpose, as has already been said, and let there rather be a quilt laid upon the pallet bedstead than a feather bed, having thereon linen clothes in many folds, with such other things as are necessary, and may be changed according to the exigence requiring it, that so the woman may not be incommoded with the blood, waters, and other filth which is voided in labor. The bed ought to be so ordered, that the woman, being ready to be delivered, should lie on her back upon it having her body in a convenient posture; that is her head and breast a little raised, so that she is between lying and sitting, for being so placed, she is best capable of breathing and likewise will have more strength to bear her pains, than if she lay otherwise, or sunk down in her bed. Being so placed she must spread her thighs abroad, folding her legs a little towards her buttocks, some-

what raiſed by a ſmall pillow underneath, to the end that her rump ſhould have more liberty to retire back, and let her feet be ſtaid againſt firm things; Beſides this, let her take hold of ſome of the good women attending her, with her hands, that ſhe may the better ſtay herſelf during her pains. She being thus placed near the ſide of her bed, having her midwife by, the better to aſſiſt upon occaſion, let her take courage, and help her pains the beſt ſhe can, bearing them down when they take her, which ſhe muſt do by holding in her breath, and forcing herſelf as much as poſſible, in like manner as when ſhe goes to ſtool; for by ſuch ſtraining, the diaphragma or midriff, being ſtrongly thruſt downwards, neceſſarily forces down the womb and the child in it. In the mean time, let the midwife endeavor to comfort her all ſhe can, exhorting her to bear her labor courageouſly, telling her it will be quickly over, and that there is no fear but ſhe will have a ſpeedy delivery. Let the midwife alſo, having no rings on her hand, anoint it with oil or freſh butter, and therewith dilate gently the inward orifice of the womb putting her finger ends into the entry thereof and ſtretch them one from the other, when her pains take her; by this means endeavoring to help forward the child, and thruſting by little and little the ſides of the orifice towards the hinder part of the child's head, anointing the parts alſo with freſh butter if it be neceſſary.

When the head of the infant is ſomewhat advanced into this inward orifice, the midwife's phraſe is, It is crowned, becauſe it girds and ſurrounds it juſt as a crown; but when it is ſo far that the extremities begin to appear without the privy parts, then ſay they "The child is in the paſſage." And at this time the woman feels herſelf as it were ſcratched or pricked with pins, and is ready to imagine that the midwife hurts her, when it is occaſioned by the violent diſtention of thoſe parts, and the laceration which, at ſome times, the bigneſs of the child's head cauſeth there. When things are in this poſture, let the midwife ſeat herſelf conveniently to receive the child, which will now come quickly, and with her finger ends (which ſhe muſt be ſure to keep cloſe paired) let her endeavor to thruſt the crowning of the womb (of which I have ſpoken before) back over the head of the child. And as ſoon as it is advanced as far as the ears, or thereabouts, let her take hold of the two ſides with her two hands, that when a good pain comes ſhe may quickly draw forth the child, taking care that the navel ſtring be not then entangled about the neck or any other part, as ſometimes it is, leſt thereby the after burden be pulled with violence, and perhaps the womb alſo, to which it is faſtened, and ſo either cauſe her to flood, or elſe break the ſtring, both which are of bad conſequence to the woman, whoſe delivery may thereby be rendered more difficult. It muſt alſo be carefully heeded that the head be not drawn out ſtrait, but ſhaking it a little from one ſide to the other, that the ſhoulders may ſooner and eaſier take their place immediately after it be paſt, without loſing any time leſt the head being paſt, the child be ſtopped there by the bigneſs of the ſhoulders and ſo come in danger of being ſuffocated

and ſtrangled in the paſſage, as it ſometimes happens for want of care therein. But as ſoon as the head is born, if there be need ſhe may ſlide in her fingers under the arm pits, and the reſt of the body will follow without difficulty.

As ſoon as the midwife hath in this manner drawn forth the child, let her put it on one ſide, leſt the blood and water which follow immediately, ſhould do it an injury, by running into its mouth and noſe, as it would do if it lay on its back, and ſo endanger the choaking it. The child being thus born, the next thing requiſite is to bring away the after burden; but before that, let the midwife be very careful to examine whether there be more children in the womb; for ſometimes a woman may have twins that expected it not; which the midwife may eaſily know by the continuance of the pains after the child is born, and the bigneſs of the mother's belly. But the midwife may be more ſure of it if ſhe puts her hand up the entry of the womb, and finds there another water gathering, and a child in it preſenting to the paſſage: and if ſhe finds ſo, ſhe muſt have a care of going about to fetch away the after birth, till the woman be delivered of all the children ſhe is pregnant with. Wherefore the firſt ſtring muſt be cut, being firſt tied with a thread three or four times doubled and the other end faſtened with a ſtring to the woman's thigh, to prevent the inconvenience it may cauſe by hanging between her thighs: and then removing the child already born, ſhe muſt take care to deliver her of the reſt, whether more or leſs, obſerving all the ſame circumſtances as the firſt; after which it will be neceſſary to fetch away the after birth, or births But of that in another ſection; after firſt ſhewing what is to be done to the new born infant.

SECT. II *Of the cutting off the Child's Navel ſtring.*

THOUGH this is by many accounted but a trifle, yet great care is to be taken about it; and it ſhows none of the leaſt art or ſkill of a midwife to do it as it ſhould be: In doing this the midwife ought to obſerve, 1. The time; 2. The place; 3 The manner; 4. The event.

The time is, as ſoon as ever the infant comes out of the womb, whether it brings part of the after birth with it or not; for ſometimes the child brings into the world a piece of the amnois upon its head, and is what the good woman calls the caul, and ignorantly attributes ſome extraordinary virtue to the child that is ſo born; but this opinion is only the effect of their ignorance; for when a child is born with ſuch a crown (as ſome call it) upon its brows it generally betokens weakneſs, and denotes a ſhort life. But to the matter in hand. As ſoon as the child is come into the world, conſider whether it be weak or ſtrong; and if it be weak, let the midwife gently put back part of the vital and natural blood into the body of the child by its navel; for that recruits a weak child; but, if the child be ſtrong, the operation is needleſs. Only let me adviſe you that many children that are born ſeemingly dead, may be ſoon brought to life again if you ſqueeze ſix or ſeven drops of blood out of that part of the navel ſtring which is cut off, and give it to the child inwardly.

Authors can ſcarce agree whether the navel ſtring ſhould be cut long or ſhort; ſome preſcribing it to be cut off at four finger's breadth which is at beſt but an uncertain rule, unleſs all fingers were of a ſize. It is a received opinion that the parts adapted to generation are either contracted or dilated according to the cutting of the navel ſtring; and therefore midwives generally leave a longer part of it to a male than to a female, becauſe they would have the male well provided for the encounters of Venus; and the reaſon they give that they cut that of the females ſhorter, is, becauſe they believe it makes them modeſt, and their privities narrower, which makes them more acceptable to their huſbands. Mizaldus was not of this opinion, and therefore he ordered the navel ſtring to be cut long both in male and female children; becauſe, ſaid he, the inſtrument of generation follows the proportion of it, and therefore if it be cut too ſhort in a female, it will be a hinderance of her having children. I will not contradict theſe opinions of Mizaldus, that experience has made good. The one is, that if the navel ſtring of a child, after it is cut be ſuffered to touch the ground, the child will never hold its water, neither ſleeping or waking, but will be ſubject to an involuntary making of water all its life time. The other is, that a piece of the child's navel ſtring carried about one, ſo that it touch his ſkin, defends him that wears it from the falling ſickneſs and convulſions.

As to the manner how it muſt be cut: Let the midwife take a brown thread four or five times double, of an ell long, or thereabouts, tied with a ſingle knot at each of the ends, to prevent their entagling; and with this thread ſo accommodated (which the midwife muſt have in readineſs before the the woman's labor, as alſo a good pair of ſciſſors, that no time may be loſt) let her tie the ſtring within an inch of the belly with a double knot, and turning about the ends of the thread let her tie two more on the other ſide of the ſtring, reiterating it again if it be neceſſary; then let her cut off the navel another inch below the ligature, towards the after birth, ſo that there only remains but two inches of the ſtring, in the midſt of which will be the knot we ſpeak of, which muſt be ſo ſtrait knit as not to ſuffer a drop of blood to ſqueeze out of the veſſels: but care muſt be taken not to knit it ſo ſtrait as to cut it in two, and therefore the thread muſt be pretty thick, and pretty ſtrait knit, it being better too ſtrait than too looſe; for, ſome children have miſerably loſt their lives, with all their blood, before it was diſcovered, becauſe the navel ſtring was not well tied. Therefore great care muſt be taken that no blood ſqeeze through, for if there does, a new knot muſt be made with the reſt of the ſtring. You need not fear to bind the navel ſtring very hard, becauſe they are void of ſenſe, and that part of it which you leave on falls off of its own accord, in a very few days, ſometimes ſix or ſeven, and ſometimes ſooner; but rarely tarries longer than the eighth or ninth. When you have thus cut the navel ſtring, then take care the piece that falls off touch not the ground for the reaſon I told you Mizaldus gave, which experience has juſtified.

As to the laſt thing I mentioned, which is the event or conſequence, of what follows cutting of the navel ſtring: As ſoon as the naval ſtring is cut off, apply a little cotten or lint to the place to keep it warm, leſt the cold enter into the body of the child, which it will moſt certainly do if you have not bound it hard enough. If the lint or cotton you apply to it be dipt in oil of roſes, it will be the better; and then put another ſmall rag three or four times double upon the belly. Upon the top of all, put another ſmall bolſter, and then ſwathe it with a linen ſwathe four fingers broad, to keep it ſteady, leſt by rolling too much, or by being continually ſtirred from ſide to ſide, it comes to fall off before the naval ſtring, which you left remaining, is fallen off. It is the uſual cuſtom of midwives to put a piece of burnt rag to it, which we commonly call tinder: but I would rather adviſe them to put a little of armoniac to it, becauſe of its drying quality. But this ſhall ſuffice to be ſpoken as to the cutting of the navel ſtring.

SECTION III. *How to bring away the after burden.*

A WOMAN cannot be ſaid fairly to be delivered, though the child be born, till the after burden be alſo taken from her; herein differing from moſt animals, who, when they have brought forth their young, caſt forth nothing elſe but ſome waters, and the membranes which contained them. But women have an after labor, which ſometimes proves more dangerous than the firſt: and how to bring it ſafely away, without prejudice to her, ſhall be my buſineſs to ſhew in this ſection.

As ſoon as the child is born, before the midwife either ties or cuts the navel ſtring, leſt the womb ſhould cloſe, let her take the ſtring and wind it once or twice about one or two of the fingers of her left hand joined together, the better to hold it, with which ſhe may draw it moderately, and with the right hand ſhe may only take a ſingle hold of it above the left near the privities, drawing likewiſe with that very gently, reſting the while the fore finger of the ſame hand, extended and ſtretched forth along the ſtring towards the entry of the vagina; always obſerving, for the more facility, to draw it, from the ſide where the burden cleaves leaſt, for in ſo doing the reſt will ſeparate the better: and eſpecially care muſt be taken that it be not drawn forth with too much violence, leſt by breaking the ſtring near the burden, the midwife will be obliged to put the whole hand into the womb to deliver the woman; and ſhe had need be a very ſkilful perſon that undertakes it, leſt the womb to which this burden is ſometimes very ſtrongly faſtened, be drawn with it, as it has ſometimes happened. It is therefore beſt to uſe ſuch remedies as may aſſiſt nature. And here take notice, that what brings away the birth will alſo bring away the after birth. And therefore, for the affecting this work, I will lay down the following rules:

1. Uſe the ſame means in bringing away the after birth that you make uſe of to bring away the birth; for the ſame care and circumſpection is needful now that was then.

2. Conſider the laboring woman cannot but be much ſpent by what ſhe has already undergone in bringing forth the infant;

and therefore be ſure to take care to give her ſomething to comfort her. And in this caſe good jelly broths, alſo a little wine and toaſt in it, and other comforting things will be neceſſary.

3. A little white hellebore in powder, to make her ſneeze, in this caſe is very proper.

4. Tanſey and the ſtone Ætites, applied as before directed, is alſo of good uſe in this caſe.

5. If you take the herb vervain, and either boil it in wine or make a ſyrup with the juice of it, which you may do, by adding to it double its weight of ſugar (having clarified the juice before you boil it) and a ſpoonful or two of that given to the woman is very efficacious to bring away the ſecundine; and feverfew and mugwort, have the ſame operation taken as the former.

6. Alexander boiled in wine, and the wine drank; alſo ſweet ſervile, ſweet cicely, angelica roots, and maſterwort, are excellent remedies in this caſe.

7. Or if theſe fail, the ſmoke of marygolds received up a woman's privities by a funnel have been known to bring away the after birth, even when the midwife let go her hold.

8. Which is all I ſhould add in this caſe. Boil mugwort in water till it be very ſoft; then take it out, and apply it in manner of a poultice to the navel of the laboring woman, and it inſtantly brings away the birth and after birth: but ſpecial care muſt be taken to remove it as ſoon as they come away, leſt by its longer tarrying, it ſhould draw away the womb alſo. But thus much ſhall ſuffice to be ſpoken of in bringing away the after burden in all natural labors.

SECTION IV. *Of laborious and difficult Labors, and how the Midwife is to proceed therein.*

TO proceed in this ſection the more regularly, it will be neceſſary to acquaint the reader that there are three ſorts of bad labors, all painful and difficult, but not all properly unnatural. It will be neceſſary therefore to diſtinguiſh theſe.

The firſt of theſe bad labors is that wherein the mother and child ſuffer very much by extreme pain and difficulty, even though the child come right; and this is diſtinguiſhably called laborious labor.

The ſecond is that which is difficult, and differs not much from the former except that beſides thoſe extraordinary pains, it is generally attended with ſome unhappy accident, which, by retarding the birth, cauſes the difficulty; and theſe difficulties being removed, accelerates the birth and haſtens the delivery.

Some have aſked what the reaſon is that women bring forth their children with ſo much pain? I anſwer, the ſenſe of feeling is diſtributed to the whole body by the nerves, and the mouth of the womb being ſo ſtraight that it muſt of neceſſity be dilated at the time of the woman's delivery, the dilating thereof ſtretches the nerves, and from thence comes the pain. And therefore the reaſon why ſome women have more pain in their labor than others, proceeds from their having the mouth of the matrix more full of nerves than others, as ſkilful anatomiſts do eaſily diſcover.

But to proceed, the beſt way to remove theſe difficulties that occaſion ſuch hard pains and labor I am here to treat of, is to ſhew from whence they proceed for the cauſe of any diſtemper being known, is as much as half the cure Now the difficulty of labor proceeds either from the mother or child, or both.

From the mother, by reaſon of the indiſpoſition of her body, or may be from ſome particular part only, and chiefly the womb, as when the woman is weak, and the womb is not active to expel its burden, or from weakneſs or diſeaſe, or want of ſpirits : or it may be from ſome ſtrong paſſion of the mind with which ſhe was before poſſeſſed ; it may be alſo becauſe ſhe hath been too young, and ſo may have the paſſage too ſtrait ; or too old, and then, if it be her firſt child, becauſe her parts are too dry and too hard, and cannot be ſo eaſily dilated, as happens alſo to them who are too lean. Likewiſe thoſe who are either ſmall, or ſhort, or deformed, as crooked women, who have not a breath ſtrong enough to help their pains, and to bear them down, and perſons that are crooked having ſometimes the bones of the paſſage not well ſhapen ; the cholic alſo hinders labor, by preventing the true pains, and all great and acute pains, as when the woman is taken with a violent fever, great flooding, frequent convulſions, bloody flux or any other great diſtemper.

Alſo excrements retained cauſe much difficulty, and ſo does a ſtone in the bladder ; or when the bladder is full of urine, without being able to void it ; or when the woman is troubled with great and painful biles It may alſo be from the paſſages, when the membranes are thick, the orifice too ſtrait, and the neck of the womb is not ſufficiently open, the paſſages are preſſed and ſtrained by tumors in the adjacent parts, or when the bones are too firm, and will not open, which very much endangers mother and child ; or when the paſſages are not ſlippery, by reaſon of the waters having broke too ſoon, or the membranes being too thin. The womb may alſo be out of order with reſpect to its bad ſituation, or conformation, having its neck too ſtrait, hard or callous ; which may eaſily be ſo naturally, or may come by accident, being many times cauſed by a tumor. a poſthume, ulcer, or ſuperfluous fleſh.

As to hard labor occaſioned by the child, it is when the child happens to ſtick to a mole, or when it is ſo weak that it cannot break the membranes, or if it be too big all over, or in the head only, or if the navel veſſels are twiſted about its neck, when the belly is hydropical, or when it is monſtrous, having two heads, or being joined to another child ; alſo when the child is dead, or ſo weak that it can contribute nothing to its birth, likewiſe when it comes wrong, or when there are one or two more. And in all theſe various difficulties there is oftentimes one more, and that is the ignorance of the midwife ; for want of underſtanding her buſineſs hinders nature in her work, inſtead of helping her.

Having thus looked into the cauſe of hard labor, I will now ſhew the induſtrious midwife how ſhe may miniſter ſome reliefto the laboring woman under theſe circumſtances. But it will require underſtanding and judgment in the midwife, when ſhe finds a woman in difficult labor, to know the particular obſtruc-

tion, or cauſe thereof, and ſo a ſuitable remedy may be applied. As for inſtance, when it happens by the mothers being too young and to ſtrait, ſhe muſt be gently treated, and the paſſages anointed with oil, hog's lard, or freſh butter, to relax and dilate them the eaſier, leſt there ſhould happen a rupture of any part when the child is born; for ſometimes the peritonæum breaks with the ſkin from the privities of the fundament. But if a woman be in years with her firſt child, let her lower parts be anointed to mollify the inward orifice, which in ſuch a caſe being more hard and callous, doth not eaſily yield to the diſtention of labor, which is the true cauſe why ſuch women are longer in labor, and alſo why their children, being forced againſt the inward orifice of the womb (which as I have ſaid, is a little callous) are born with great humps and bruiſes on their heads. Thoſe women that are very ſmall and miſhapen ſhould not be put to bed, at leaſt till their waters are broke, but rather kept upright, and aſſiſted to walk about the chamber, by being ſupported under their arms; for by that means they will breathe more freely, and bear their pains better than on the bed, becauſe there they lie all on a heap. As for thoſe that are very lean, and have hard labor, from that cauſe, let them moiſten the parts with oils and ointments, to make them more ſmoothe and ſlippery, that the head of the infant and the womb be not ſo compaſſed and bruiſed by the hardneſs of the mother's bones which form the paſſage. If the cauſe be weakneſs, ſhe ought to be ſtrengthened, the better to ſupport her pains; to which end give her good jelly broths, and a little wine with a toaſt in it. If ſhe fears her pains, let her be comforted, aſſuring her that ſhe will not bear many more, but be delivered in a little time. But if her pains be ſlow and ſmall, or none at all, they muſt be provoked by frequent and pretty ſtrong clyſters, that ſo they may be excited thereby; after which, let her walk about the chamber, that ſo the weight of the child may help them forward. But if ſhe flood or have convulſions; ſhe muſt then be helped by a ſpeedy delivery; the operation whereof I ſhall relate in the ſection of unnatural labors. If ſhe be coſtive, let her uſe clyſters, which may alſo help to diſpel the cholic, at thoſe times, very injurious, becauſe attended with uſeleſs pains, and becauſe ſuch bear not downwards, and ſo help not to forward the birth. If ſhe finds an obſtruction or ſtoppage on the urine, by reaſon the womb bears too much on the bladder, let her lift up her belly a little with her hand, and try if by that ſhe receives any benefit; if ſhe finds ſhe does not, it will be neceſſary to introduce a catheter in the bladder, and thereby draw forth her urine. If the difficulty be from the ill poſture of a woman, let her be placed otherwiſe, in a poſture more ſuitable and convenient for her. Alſo if it proceed from the indiſpoſitions of the womb, as from its oblique ſituation, &c. it muſt be remedied, as well as can be by the placing of her body accordingly; or if it be a vicious confirmation, having the neck too hard, too callous, and too ſtrait, it muſt be anointed with oils and ointments as before directed. If the membranes be ſo ſtrong as that the waters don't break in due time, they may be broken with the fingers if the

midwife be firſt well aſſured that the child come forward into the paſſage, and ready to follow after, or elſe by the breaking of the waters too ſoon, the child may be in danger of remaining dry a long time; to ſupply which defect you may moiſten the parts with fomentations, decoctions, and emollient oils; which yet is not half ſo well as when nature does the work in her own time, with the ordinary ſlime and waters which do beſt when they come in their own proper time and places. But theſe membranes do ſometimes preſs forth with the waters three orfour fingers breadth out of the body before the child reſembling a bladder full of water; but there is then no great danger to break them, if they be not already broken, for when the caſe is ſo, the child is always in readineſs to follow, being in the paſſage; but let the midwife be very careful not to pull it with her hand, leſt the after burden be thereby looſened before its time, for it adheres thereto very ſtrongly. If the navel ſtring happens to come firſt, it muſt preſently be put up again, and kept too if poſſible, or otherwiſe the woman muſt immediately be delivered. But if the after burden ſhould come firſt, it muſt not be put up again by no means; for the infant having no further occaſion for it, it would be but an obſtacle if it were put up: in this caſe it muſt be cut off having tied the navel ſtring, and afterwards drawn forth the child with all the ſpeed that may be, leſt it be ſuffocated.

SECTION V. *Of Women laboring with a dead Child.*

WHEN the difficulty of labor arriſes from a dead child, it is a caſe of great danger to the mother, and great care ought to be taken therein: but before any thing be done, the midwife ought to be well aſſured the child is dead indeed, which may be known by theſe ſigns.

1. The breaſt ſuddenly ſlacks, or falls flat, or bags down.

2. A great coldneſs poſſeſſes the belly of the mother, eſpecially about the navel.

3. Her urine is thick, a ſtinking ſettling at the bottom.

4. No motion of the child can be perceived: for the trial whereof let the midwife put herhand in warm water and lay it upon her belly; for that if it be alive, will make it ſtir.

5 She is very ſubject to dream of dead men and be affrighted therewith.

6. She has extravagant longings to eat ſuch things as are againſt nature.

7. Her breath ſtinks though not uſed ſo to do.

8. When ſhe turns herſelf in the bed, or riſes up, the child ſways that way like a lump of lead.

But theſe things carefully obſerved, the midwife may make a judgment whether the child be alive or dead; eſpecially if the woman takes the following preſcription:

"Take half a pint of white wine, and burn it, and add thereto half an ounce of cinnamon, but no other ſpice whatever," and when ſhe has drank it, if her travailing pains come upon her, the child is certainly dead; but if not, the child may poſſibly be either weak or ſick, but not dead. And in this

caſe, it will refreſh the child, and give her eaſe; for cinnamon refreſheth and ſtrengtheneth the child in the womb.

Now if, upon trial, it be found the child is dead, let the mother do all ſhe can to forward her delivery, becauſe a dead child can be no ways helpful therein. It will be neceſſary therefore that ſhe take ſome comfortable things to prevent her fainting, by reaſon of thoſe putrid vapors aſcending from the dead child. And in order to her delivery, let her take the following herbs boiled in white wine, (or as many of them as you can get) viz. Dittany, betony, pennyroyal, ſage, feather few, century, ivy leaves and berries. Let her alſo take ſweet baſil in powder, half a dram at a time, in white wine; and her privities be anointed with the juice of garden tanſey; or, if you take tanſey in the ſummer when it may be moſt plentifully had, and before it runs up to the flower, and having bruiſed it well, boil it in oil till the juice of it be conſumed. If you ſet it in the ſun, after you have mixed it with oil, it will be more effectual. This a careful midwife ought to have always by her. As to the manner of her delivery, the ſame methods muſt be uſed as are mentioned in the ſection of natural labor. And here I cannot but again commend the ſtone Ætites, held near the privities, whoſe magnetic virtue draws the child any way with the ſame facility as the loadſtone draws iron.

Let the midwife alſo make a ſtrong decoction of hyſſop with water, and give the woman to drink it very hot, and it will, in a little time, bring away the dead child. A decoction of the herb maſterwort, uſed as the above, works the ſame effects The roots of polipodium ſtamped well, warmed a little, and bound on the ſides of her feet, will ſoon bring away the child either alive or dead.

If as ſoon as ſhe is delivered of the dead child, you are in doubt part of the afterbirth is left behind, for in ſuch caſes, being rotten, it may come away piece meal, let her continue drinking the ſame decoction till her body is cleanſed.

The following medicines ſtir alſo up the expulſive faculty; but in this caſe they muſt be made ſtronger becauſe the motion of the child ceaſeth.

Take ſavin, round birthwort, troches of myrrh, aſaram roots, cinnamon half an ounce, ſaffron a ſcruple, give a dram with ſavin water. Or, take borax, ſavin, dittany, each an ounce; myrrh aſaram roots, cinnamon, ſaffron, each half a dram make a powder, give a dram.

But ſhe may purge firſt, and put her in an emollient bath, anointing her round about the womb with oil of lilies, ſweet almonds, camomile, hen and gooſe greaſe. Alſo, foment to get out the child with a decoction of mercury, orris, wild cucumbers, fœchus, broom flowers Then anoint the privities and loins with ointment of ſowbread: Or,

Take coloquintida, agaric, birthwort, each a dram, make a powder, add armoniac diſſolved in wine, ox gall, each two drams, with oil of kier make an ointment. Or, make a fume with aſſes' hoofs burnt, or gallianum, or caſter, and let it be taken in with a funnel.

To take away pains and ſtrengthen the parts, foment with the decoction of mugwort, mallows, roſemary, woodmyrtle, St. John's wort, each half an ounce; ſpermaceti two drams, deer's ſuet an ounce, with wax make an ointment. Or, take wax four ounces, ſpermaceti an ounce, melt them, dip flax therein, and lay it all over her belly.

If none of theſe things will do, the laſt remedy is to uſe ſurgery, and then the midwife ought, without delay, to ſend for an expert and able man midwife, to deliver her by manual operation; of which I ſhall treat more at large in the next chapter.

CHAP. VI.

IN ſhewing the duty of a midwife, when the woman's labor is unnatural, it will be requiſite to ſhew in the firſt place what I mean by natural labor; for, it is natural to a woman to bring forth children in pain and ſorrow. That which I call unnatural, is when the child comes to the birth in a contrary poſture to that which nature ordained, and in which the generality of children come into the world. Now, as truth is but one, but error dilates itſelf into infinite variety; ſo there is but one proper right and natural poſture in which children come to birth; but there are as many wrong and unnatural ways, as there are different poſtures of children when they are come to be born. The right and natural birth is when the child comes with its head firſt and yet even this is too ſhort a definition of a natural birth, for if any part of the head but the crown comes firſt, ſo that the body follow not in a ſtraight line it is a wrong and difficult birth. Now there are four general ways a child may come wrong; 1ſt, when any of the fore parts of the body firſt preſent themſelves. 2dly, when by an unhappy tranſpoſition, any of the hinder parts firſt preſent themſelves. 3dly, when either of the ſides. Or, 4thly, when the feet preſent themſelves firſt. To theſe four, all the particular and different wrong poſtures that a child can preſent itſelf in for the birth, may be reduced; and therefore I ſhall confine myſelf only to treat of theſe four more general wrong ways.

SECTION I.

How to deliver a Woman of a dead child by natural operation.

THE laſt ſection of the laſt chapter treated of the delivering of a woman of a dead child, and ſeveral things were directed to be applied in order to facilitate the delivery; but when all theſe fail, a manual operation is abſolutely neceſſary: In order thereto, let the operator acquaint the woman with the abſolute neceſſity, there is of ſuch an operation; and that as the child has already loſt its life, there is no other way left for the ſaving of hers. Let him alſo tell her, for her encouragement, that he doubts not, with the divine bleſſing, to deliver her ſafely, and that the pain ariſing thereby will not be ſo great as ſhe fears. And then let him endeavor to ſtir up the woman's pains, by giving her ſome ſharp clyſter to excite her throes to bear down and bring forth the child, and if this prevail not, let him proceed with his manual operation.

Firſt, Let her be placed croſs the bed, that he may operate the eaſier; and let her lie on her back with her hips a little

higher than her head, or at leaſt the body equally placed, when it is neceſſary to put back or turn the infant to give it a better poſture: Being thus ſituated, ſhe muſt fold her legs ſo as her heels be towards her buttocks and her thighs ſpread, and held by a couple of ſtrong perſons; there muſt be others alſo to ſupport her under her arms that the body may not ſlide down when the child is drawn forth, for which ſometimes a great ſtrength is required: let the ſheets and blankets cover her thighs for decency's ſake, and alſo to prevent her catching cold. Then let him anoint the enterance of the womb with oil or fresh butter, if neceſſary, that ſo he may with more eaſe introduce his hand, which muſt alſo be anointed; and having by ſigns before mentioned, received ſatisfaction that it is a dead child, he muſt do his endeavor to fetch it away as ſoon as poſſible; and if the child offers the head firſt, he muſt gently put it back, until he hath liberty to introduce his hand quite into the womb; then ſliding it along under the belly to find the feet, let him draw it forth by them, being very careful to keep the head from being locked in the paſſage, that it be not ſeparated from the body; which may be effected the more eaſily, becauſe the child being very rotten and putrified, the operator is not ſo mindful to keep the breaſt and face downwards as he is in living births. But if, notwithſtanding all theſe precautions, by reaſon of the child's putrefaction, the head ſhould be ſeparated, and left behind in the womb, it muſt be drawn forth according to the directions which ſhall be given in ſect. 3. of this chapter for that purpoſe. But when the head, coming firſt, is ſo far advanced that it cannot well be put back, it is better to draw it forth ſo, than to torment the woman too much by putting it back to turn it and bring it by the feet; but the head being a part round and ſlippery, it may ſo happen that the operator cannot take hold of it with his fingers by reaſon of its moiſture, nor put them up to the ſide of it, becauſe the paſſage is filled with its bigneſs, he muſt take a proper inſtrument, and put it up as far as he can without violence, between the womb and the child's head, obſerving to keep the point of it towards the head, and let him faſten it there, giving it a good hold upon one of the bones of the ſkull, that it may not ſlide; and after it is well fixed he may therewith draw it forth keeping the ends of the fingers flat upon the oppoſite ſide, the better to help diſengage it, and by ſhaking it a little to conduct it directly out of the paſſage, until the head be quite born, and then taking hold of it with the hands only, the ſhoulders may be drawn into the paſſage, and ſo ſliding the fingers of both hands under the armpits, the child may be quite delivered: and then the after burden fetched, being careful not to pluck the navel ſtring too hard, leſt it break as often happens, when it is corrupted.

If the dead child come with the arm up to the ſhoulders ſo extremely ſwelled that the woman muſt ſuffer too great a violence to have it put back 'tis then the beſt, to take it off at the ſhoulder joints, by twiſting it three or four times about, which is very eaſily done by reaſon of the ſoftneſs and tenderneſs of the body. After the arm is ſo ſeparated, and no longer poſſeſſing the paſſ-

age, the operator will have more room to put up his hand into the womb, to fetch the child by the feet and bring it away.

But although the operator be sure the child is dead in the womb, yet he must not therefore presently use instruments, because they are never to be used but when hands are not sufficient: and there is no other remedy to prevent the woman's danger, or to bring forth the child any other way: and the judicious operator will chuse that way which is least hazardous and most safe.

Section II.

How a Woman must be delivered when the Child's feet come first.

THERE is nothing more obvious to those whose business it is to assist laboring women than that the several unnatural postures in which children present themselves at their births, are the occasion of the most bad labors and ill accidents that happen unto women in such a condition.

And since midwives are very often obliged, because of the unnatural situations, to draw the children forth by the feet, I conceive it to be most proper to shew first, how a child must be brought forth that presents itself in that posture, because it will be a guide to several of the rest.

I know indeed that in this case 'tis the advice of several authors to change the figure, and place the head so that it may present the birth, and this council I should be very inclinable to follow, could they but also shew how it must be done. But it will appear very difficult, if not impossible to be performed, if we will avoid the dangers that by such violent agitations both the mother and the child must be put into, and therefore my opinion is, That it is better to draw it forth by the feet, when it presents itself in that posture, than to venture a worse accident by turning it.

As soon therefore as the waters are broke, and it is known that the child comes thus, and the womb is open enough to admit the midwife's or operators hand into it, or else by anointing the passage with oil or hog's grease, to endeavor to dilate by degrees, using her fingers to this purpose, spreading them one from the other, after they are together entered and, continuing to do so till it be sufficiently dilated, then taking care that her nails are well pared and no rings on her fingers, and her hands well anointed with oil or fresh butter, and the woman placed in the manner directed in the former section, let her gently introduce her hand into the entry of the womb, where finding the child's feet, let her draw it forth in the manner I will presently direct; only let her first see whether it presents one foot, or both, and if it be but one foot, she ought to consider whether it is the right foot or the left, and also in what fashion it comes: for by that means she will sooner come to know where to find the other, which as soon as she knows and finds, let her gently draw forth with the other; but of this she must be especially careful, viz. that this second be not the foot of another child; for if so, it may be of the most fatal consequence, for she may sooner split both mother and child than draw them forth; but this may be easily prevented, if she does but slide

her hand up the firſt leg and thigh to the twiſt, and there find both thighs joined together, and deſcending from one and the ſame body. And this is alſo the beſt means to find the other foot when it comes with but one.

As ſoon as the midwife hath found both the child's feet, ſhe may draw them forth, and holding them together, may bring them by little and little in this manner, taking afterwards hold of the legs and thighs as ſoon as ſhe can come at them, drawing them ſo till the hips become forth. Whilſt this is doing let her obſerve to wrap the parts in a ſingle cloth that ſo her hands being already greaſy, ſlide not on the infant's body which is ſlippery, becauſe of the vicious humors which are all over it, and prevent one's taking hold of it, which being done, ſhe may take hold under the hips, ſo to draw it forth to the beginning of the breaſt; and let her on both ſides with her hand bring down the arms along the child's body, which ſhe may then eaſily find; and then let her take care that the belly and face of the child be downwards, for if it ſhould be upwards there would be ſome danger of its being ſtopt by the chin over the ſhare bone; and therefore, if it be not ſo, muſt turn it to that poſture; which may be eaſily done, if ſhe take hold on the body when the breaſt and arms are forth in the manner we have ſaid, and draws it with turning it in proportion on that ſide which it moſt inclines to, till it be turned with the face downwards, and ſo having brought it to the ſhoulders, let her loſe no time, deſire the woman at the ſame time, to bear down, that ſo at drawing, the head at that inſtant, may take its place, and not to be ſtopt in the paſſage. Some children there are whoſe heads are ſo big, that when the whole body is born, yet that ſtops in the paſſage, though the midwife takes all poſſible care to prevent it. And when this happens ſhe muſt not endeavor only to draw forth the child by the ſhoulders, leſt ſhe ſometimes ſeparate the body from the head, as I have known it done by the midwife but ſhe muſt diſcharge it by little and little from the bones in the paſſages with the fingers of each hand, ſliding them on each ſide oppoſite the one to the other, ſometime above, and ſometimes under, until the work be ended, endeavoring to diſpatch it as ſoon as poſſible leſt the child be ſuffocated, as it will unavoidably be, if it ſhould remain long in that poſture; and this being well and carefully effected ſhe may ſoon after fetch away the after birth as I have before directed.

SECTION III.

How to bring away the Head of the Child, when ſeparated from the Body, and left behind in the Womb.

THOUGH the utmoſt care be taken in bringing away the child by the feet, yet if the child happens to be dead, it is ſometimes ſo putrified and corrupted, that with the leaſt pull the body ſeparates from the head, and remains alone in the womb, and cannot be brought away but with a manual operation and difficulty it being extremely ſlippery, by reaſon of the place where it is, and from the roundneſs of its figure, on which no hold can be well taken. And ſo very great is the difficulty in this caſe, that ſometimes two or three able practition-

ers in the art of midwifery, have one after the other left the operation unfiniſhed, as not able to effect it after the utmoſt efforts of their induſtry, ſkill and ſtrength; ſo that the woman not being able to be delivered, periſheth To prevent which fatal accidents for the time to come, let the following operation be obſerved.

When the infant's head ſeparates from the body, and is left behind, whether through putrefaction, or otherwiſe, let the operator immediately, whilſt the womb is yet open, direct up his right hand to the mouth, for no other hold can there be had; and having found it let him put one or two of his fingers into it, by little and little, holding it by the jaw; but if that fails as ſometimes it will, when putrified, then let him pull forth his right hand, and ſlide up his left with which he muſt ſupport the head, and with the right let him take a harrow inſtrument called a crotchet; but let it be ſtrong and with a ſingle branch, which he muſt guide along the inſide of his hand, with the point of it towards it, for fear of hurting the womb: and having thus introduced it, let him turn it towards the head, for to ſtrike either into an eye hole or the hole of an ear, or behind the head or elſe between the ſtature, as he finds it moſt convenient and eaſy; and then draw forth the head ſo faſtened with the ſaid inſtrument, ſtill helping to conduct it with his left hand but when he hath brought it near the paſſage, being ſtrongly faſtened to the inſtrument, let him remember to draw forth his hand, that the paſſage not being filled with it may be the larger and eaſier, keeping ſtill a finger or two on the ſide of the head; the better to diſengage it.

There is alſo another way to this, with more eaſe and leſs hardſhip than the former; which is this, let the operator take a ſoft linen or fillet ſlip of above four fingers breadth, and the length of three quarters of an ell or thereabouts, taking the two ends with the left hand, and the middle with the right and let them ſo put it up with his right as that it may be beyond the head, to embrace it as a ſling doth a ſtone; and afterwards draw forth the fillet by the two ends together, it will be eaſily drawn forth, the fillet not hindering the leaſt paſſage, becauſe it takes up little or no place.

When the head is thus fetched out of the womb, care muſt be taken that not the leaſt part of it be left behind, and likewiſe to cleanſe the woman well of her after burden, if yet remaining. Some have queſtioned whether the child's head remaining yet in the womb, or the after birth ought to be brought away firſt? The anſwer to which queſtion may be by way of diſtinction; that is to ſay, if the burden be wholly ſeparated from the ſides of the womb, that ought to be firſt brought away, becauſe it may alſo hinder the taking hold of the head; but if it ſtill adheres to the womb, it muſt not be medled with till the head be brought away; for if one ſhould then go about to ſeparate it from the womb, it might then cauſe a flooding which would be augmented by the violence of the operation; the veſſels to which it is joining remaining for the moſt part open as long as the womb is diſtended, which the head cauſeth while it is

retained in it, and cannot close till this strange body be voided, and then it doth by contracting and compressing itself together, as has been more fully before explained. Besides the after birth remaining thus cleaving to the womb during the operation, prevents it from receiving easily either bruise or hurt.

Section IV.

How to deliver a Woman when the side of the Child's Head is presented to the Birth.

THOUGH some may think it a natural labor when the child's head may come first, but yet if the child's head presents not the right way, even that is an unnatural labor, and therefore though the head comes first, yet if it be the side of the head instead of the crown, it is very dangerous both to the mother and child, for the child may sooner break its neck than be born in that manner; and by how much the mother's pains continue to bear the child, which it is impossible, unless the head be rightly placed, the more the passages are stopt; therefore as soon as the position of the child is known, the woman must be laid with all speed, lest the child should advance further in this vicious posture, and therefore render it more difficult to thrust it back, which must be done in order to place the head in the passage right as it ought to be.

To this purpose therefore place the woman so that her hips may be a little higher than her head and shoulders, causing her to lean a little upon the opposite side to the child's ill posture; then let the operator slide up his hand, well anointed with oil, by the side of the child's head, to bring it right, gently with his fingers between the head and the womb; but if the head be so engaged that it cannot be done that way, he must then put his hand to the shoulders, that so by thrusting them back a little into the womb, sometimes on the one side and sometimes on the other; he may by little and little give it a natural position. I confess it would be better if the operator could put back the child by its shoulders with both his hands; but the head takes up so much room, that he will find much ado to put up one, with which he must perform his operation, with the help of the finger ends of the other hand, put forwards the child's birth, as when the labor is natural.

Some children present their face first, having their heads turned back, in which posture it is extremely difficult that the child should be born; and if it continue so long, the face will be swelled, and withal black and blue, that it will at first seem monstrous, which is occasioned as well by the compression of it in that place, as by the midwife's fingers handling it too readily, in order to place it in a better posture. But this blackness will wear away in three or four days time, anointing it often with oil of sweet almonds. To deliver the birth, the same operation must be used as in the former, when a child comes with the side of the head; only let the midwife or operator work very gently to avoid as much as possible the bruising of the face.

SECTION. V.

How to deliver a Woman when a Child presents one or both Handstogether with the Head.

SOMETIMES the infant will present some other part together with its head, which if it does it is usually one or both its hands, and this hinders the birth, because the hands take up part of that passage which is little enough for the head alone; besides, that when this happens, they generally cause the head to lean on one side; and therefore this position may be very well stiled unnatural. When the child presents thus, the first thing to be done after it is perceived, must be to prevent it from coming down more, or engaging further in the passage. and therefore the operator, having placed the woman on the bed a little lower than her hips must put and guide back the infant's hand with his own as much as may be or both of them, if they both come down, to give way to the child's head; and this being done, if the head be on one side, it must be brought into its natural posture in the middle of the passage, that it may come in a straight line, and then proceed as directed in the foregoing section

SECTION IV. *How a Woman is to be delivered when the Hands or Feet of the Infant come together.*

THERE is none but will readily grant, that when the hands and feet of an infant present together, the labor must be unnatural, because it is impossible a child should be born in that manner. In this therefore, when the midwife guides her hand towards the orifice of the womb, she will perceive only many fingers close together; and if it be not sufficiently dilated, it will be a good while before the hands and feet will be exactly distinguished; for they are sometimes so shut and pressed together, that they seem to be all of one and the same shape; but where the womb is open enough to introduce the hand into it, she will easily know which are the hands and which are the feet; and having well taken notice thereof, let her slide her hand, and presently direct it towards the infant's breast, which she will find very near, and then let her very gently thrust back the body towards the bottom of the womb, leaving the feet in the same place where she found them; and then having placed the woman in a convenient posture, that is to say, her hips a little raised above her breast and head (which situation ought always to be observed when the child is to be put back into the womb) let the midwife afterwards take hold of the child by the feet, and draw it forth, as is directed in the second section.

This labor, though somewhat troublesome, yet is much better than when the child presents only its hands; for the child must be quite turned about before it can be drawn forth: but in this, they are ready presenting themselves, and in this there is not so much to do, but to lift and thrust back a little the upper part of the body, which is almost done of itself by drawing it along by the feet.

I confess there are many authors that have written of labors, who would have all wrong births reduced to a natural figure: which is to turn it, that it may come with the head first; but

thoſe that have thus written are ſuch as never underſtood the practical part; for if they had the leaſt experience herein, they would know that it is very often impoſſible, at leaſt if it were to be done, that violence muſt neceſſarily be uſed in doing it, that would very probably be the death of mother and child in the operation. I would therefore lay down as a general rule, that whenſoever an infant preſents itſelf wrong to the birth, in what poſture ſoever from the ſhoulders to the feet, it is the beſt way, and ſooneſt done, to draw it out by the feet: and that it is better ſearching for them if they do not preſent themſelves, rather than try to put it in the natural poſture, and place the head foremoſt; for the great endeavors neceſſary to be uſed in turning the infant in the womb do ſo much weaken both mother and child, that there remains not afterwards ſtrength enough to commit the operation to the work of nature, for uſually the woman hath no more throes or pains fit for labor, after ſhe has been ſo wrought upon; for which reaſon it would be very difficult and tedious at beſt: and the child by ſuch an operation, made very weak, would be in extreme danger of periſhing before it could be born. It is therefore much better in theſe caſes to bring it away immediately by the feet, ſearching for them, as I have already directed, when they do not preſent themſelves: by which the mother will be prevented of a tedious labor, and the child be often brought alive into the world, who otherwiſe would hardly eſcape death. And thus much ſhall ſuffice to be ſaid of unnatural labors; for by the rule already given a ſkilful artiſt will know how to proceed in any poſture in which the child ſhall preſent itſelf

SECTION VII. *How a Woman ſhall be delivered that has Twins which preſent themſelves in different poſtures.*

WE have already ſpoken ſomething of the birth of twins in the chapter of unnatural labor; for it is not an unnatural labor barely to have twins, provided they come in a right poſition to the birth. But when they ſhall preſent themſelves in divers poſtures they come properly under the denomination of unnatural labors: and if when one child preſents itſelf in a wrong figure it makes it much more ſo when there are ſeveral, and renders it not only more painful to the mother and children, but to the operator alſo, for they often trouble each other, and hinder both their births, beſides which, the womb is then ſo filled with them that the operator can hardly introduce his hand without much violence which he muſt do, if they be to be turned to thruſt back, to give them a better poſition.

When a woman is pregnant with two children, they rarely preſent to the birth together, the one being generally more forward than the other, and that is the reaſon that but one is felt; that many times the midwife knows not that there are twins till the firſt is born, and that ſhe is going to fetch away the after birth. In the 5th chapter, wherein I treated of natural labor, I ſhewed how a woman ſhould be delivered of twins, preſenting themſelves both right; and therefore, before I cloſe this chapter of unnatural labor, it only remains that I ſhew what ought to be done, when they either both come wrong, or one of them

only, as for the moſt part it happens: the firſt generally coming right, and the ſecond with the feet forward, or in ſome worſe poſture. In ſuch a caſe, the birth of the firſt muſt be haſtened as much as poſſible to make way for the ſecond, which is beſt brought away by the feet, without endeavoring to place it right, even though it was ſomewhat inclining towards it, becauſe it has been already tired and weakened by the birth of the firſt as well as its mother, that there would be greater danger of its death than likelihood of its coming out of the womb that way.

But if, when the firſt is born naturally, the ſecond ſhould likewiſe offer its head to the birth, it would be then beſt leaving nature to finiſh what ſhe has ſo well begun; and if nature ſhould be too ſlow in her work, ſome of thoſe things mentioned in the fourth chapter to accelerate the birth may be properly enough applied; and if after that, the ſecond birth ſhould be yet delayed, let a manual operation be deferred no longer: but the woman being properly placed, as has been before directed, let the operator direct his hand gently into the womb to find the feet, and ſo draw forth the ſecond child, which will be the more eaſily affected, becauſe there is way made ſufficient by the birth of the firſt; and if the waters of the ſecond child be not broke, as it often happens, yet intending to bring it by the feet, he need not ſcruple to break the membranes with his fingers; for though when the birth of a child is left to the operation of nature it is neceſſary that the waters ſhould break of themſelves; yet when the child is brought out of the womb by art, there is no danger in breaking of them; nay, on the contrary, it becomes neceſſary; for without the waters are broke it would be almoſt impoſſible to turn the child.

But herein principally lies the care of the operator that he is not deceived when either the hands or the feet of both children offer themſelves together to the birth; in this caſe he ought well to conſider the operation, as whether they be not joined together or any way monſtrous; and which part belongs to one child and which to the other, that ſo they may be fetched one after the other, and not both together, as might be, if it were not duly conſidered, taking the right foot of the one and the left of the other, and ſo drawing them together, as if they belonged to one body becauſe there is a left and a right, by which means it would be impoſſible ever to deliver them: But a ſkilful operator will eaſily prevent this, if having found two or three feet of ſeveral children, preſenting together in a paſſage, and taking aſide two of the forwardeſt, a right and a left, and ſliding his hands along the legs and thighs up to the twiſt, if forwards or the buttocks, if backwards, he finds they both belong to the body; of which being thus aſſured, he may begin to draw forth the neareſt, without regarding which is ſtrongeſt or weakeſt, bigger or leſs, living or dead, having put firſt a little aſide that part of the other child which offers, to have the more way and ſo diſpatch the firſt, wherever it is, as ſoon as may be, obſerving the ſame rules, as if there were but one, that is keeping the breaſt and face downwards, with every circumſtance directed in the ſection where the child comes with its feet firſt.

And not fetch the burden till the ſecond child is born. And therefore when the operator has drawn forth one child, he muſt ſeparate it from the burden, having tied and cut the navel ſtring, and then fetch the other by the feet in the ſame manner, and afterwards, bring away the after burden with the two ſtrings, as have been before ſhewed. If the children preſent any other part than the feet, the operator may follow the ſame method as is directed in the foregoing ſection, where the ſeveral unnatural poſitions are carefully treated of.

CHAP. VIII.

Directions for child bearing Women in their lying in.

IN the fourth, fifth, and ſixth chapters, we have treated at large of women's labor, and how they may be ſafely delivered both in natural and unnatural labors. Having therefore thus brought the good woman to bed, I will in this chapter direct how ſhe ought to be ordered in her lying in.

SECT. I. *How a Woman newly delivered ought to be ordered.*

AS ſoon as ſhe is laid in bed let her be placed in it conveniently for eaſe and reſt, which ſhe ſtands in great need of, to recover herſelf of the great fatigue ſhe underwent during her travail; and, that ſhe may lie the more eaſily, let her head and body be a little raiſed, that ſhe may breathe more freely, and cleanſe the better, eſpecially of that blood which then comes away that ſo it may not clot, which being retained cauſeth very great pain.

Having thus placed her in bed, let her drink a draught of burnt white wine, when you have firſt melted therein a dram of ſpermaceti. The herb vervain is alſo a moſt ſingular herb for a woman in this condition, boiling it in what ſhe either eats or drinks, fortifying the womb ſo exceedingly, that it will do it more good in two days, having no offenſive taſte, though very pleaſant virtues. And this is no more than what ſhe ſtands in need of, for her lower parts being ſo greatly diſtended to the birth of the infant, it is good to endeavor the prevention of an inflamation there. Let therefore be outwardly applied all over the bottom of the belly and privities, the following anodyne or cataplaſm Take two ounces of oil of ſweet almonds, and two or three new laid eggs, yolks and whites, ſtirring them together in an earthen pipkin over hot embers, till it comes to the conſiſtence of a poultice; which being ſpread upon a cloth, muſt be applied to thoſe parts indifferently warm, having firſt taken away the cloſures (which were put to her preſently after her delivery) and likewiſe ſuch clots of blood as were then left. Let this lie on five or ſix hours, and then renew it again as you ſee cauſe

Great care ought to be taken at firſt, that if her body by very weak, ſhe be not kept too hot, for extremity of heat weakens nature and diſſolves the ſtrength; and whether ſhe be weak or ſtrong, be ſure that no cold air comes near her at firſt; for cold is an enemy to the ſpermatic parts, and if it gets into the womb, it increaſes the after pains, cauſes ſwellings in the womb, and hurts the nerves As to her diet, let it be hot, and let her eat but a little at a time. Let her avoid the light for three or four

days, and longer if she be weak, for labor weakens her eyes exceedingly, by a harmony between the womb and them. Let her avoid great noises, sadness and troubles of mind.

If the womb be foul, which may be easily perceived by the impurity of the blood (which will then either come away in clots or stinking, or if you suspect any of the after burden to be left behind, which may sometimes happen) make her drink of featherfew, mugwort, pennyroyal, and mother of thyme, boiled in white wine, sweetened with sugar.

Panada and new laid eggs is the best meat for her at first, of which she may eat often, but not too much at a time. And let her use cinnamon in all her meat and drink, for it is a great strengthener to the womb.

Let her stir as little as may be, till after the fifth, sixth, or seventh days of her delivery, if she be weak. And let her talk as little as may be, for that weakens her.

If she goes not well to stool, give a clyster made only with the decoction of mallows and a little brown sugar.

When she hath lain in a week or more, let her use such things as close the womb, of which, knot grass and comfrey are very good; and to them you may add a little polipodium, for it will do her good, both leaves and roots being bruised.

SECT. II. *How to remedy those accidents which a lying in woman is subject to.*

I. THE first common and usual accident that troubles women in their lying in, is after pains; the cause whereof some affirm to be one thing, some another; but it is most certain that they proceed from cold and wind contained in the bowels with which they are filled after labor, because when they have more room to dilate, than when the child was in the womb, by which they were compressed, and also because the nourishment and matter contained in them and the stomach, has been confusedly agitated from side to side during the pains of labor, and could not be well digested, whence this wind is afterwards generated and by consequence the gripes which the woman feels running into her belly from side to side, according as the wind moves, and sometimes from the womb because of the compression and commotion which the bowels make. These being generally the cause, let us now apply a suitable remedy.

1. Boil an egg soft and pour out the yolk of it, with which mix a spoonful of cinnamon water and let her drink it; and if you mix in it two grains of ambergrease it will be the better; and yet virvain taken in any thing she drinks, will be effectual. as the other.

2. Give the lying in woman, immediately after delivery, oil of sweet almonds and syrup of maidenhair mixed together: some prefer oil of walnuts, provided it be made of nuts that are very good, but it tastes worse than the other. This will lenify the insides of the intestines by its unctuousness, and by that means bring away that which is contained in them more easily.

3 Take and boil onions very well in water, then stamp them with oil and cinnamon and seed in powder, spread them upon a cloth and apply them to the region of the womb.

4. Let her be careful to keep her belly very hot, and not drink what is too cold; and if they prove very violent, hot cloths, from time to time, muſt be laid on her belly, or a pancake fried in walnut oil may be applied to it without ſwathing her belly ſo ſtrait; and, for the better evacuating the wind out of the inteſtines, give her a clyſter repeating it as often as neceſſity requires.

5. Take bayberries, beat them to powder, put the powder upon a chaffing diſh of coals, and let her receive the ſmoke of them up her privities.

6. Take tar and barrows greaſe, of each an equal quantity, boil them together, and whilſt it is boiling add a little pidgeon's dung to it. Spread ſome of this upon a linen cloth and apply it to the reins of her back, and it will give her ſpeedy eaſe.

Laſtly, let her take half a dram of bayberries beaten into a powder in a draught of muſtard or tent.

II. Another accident in which women in child bed are ſubject, is the hemorrhoides, or piles, occaſioned through their ſtraining in bringing the child into the world. To cure this,

1. Let her be let blood in the vein ſaphæna.

2 Let her uſe pollypodium in her meat and drink, bruiſed and boiled.

3. Take an onion, and, having made a hole in the middle of it fill it full of oil, toaſt it and having bruiſed it all together, apply it to the fundament.

4. Take as many wood lice as you can get, and bruiſe them, and having mixed them with a little oil, apply them warm as before.

5. If ſhe go well to ſtool, let her take an ounce of caſſia fiſtula drawn at night going to bed; ſhe need no change of diet after.

III. Retention of the menſtrues is another accident happening to women in child bed; and, which is of ſo dangerous conſequence, that, if not timely remedied it proves mortal. Where this happens,

1. Let the woman take ſuch medicines as ſtrongly provoke the terms, ſuch as ditany, betony, ſavory, featherfew, centaury, juniper berries, peony roots

2 Let her take two or three ſpoonfuls or briony water each morning.

3. Gentian roots beaten into a powder, and a dram of it taken every morning in wine, is an extraordinary remedy.

4. The root of birthwort, either long or round, ſo uſed, and taken as the former is very good.

5. Take twelve piony ſeeds, and beat them into a very fine powder, and let her drink them in a draught of hot carduus poſſet, and let her ſweat after. And if this laſt medicine don't bring them down the firſt time ſhe takes it, let her take as much more three hours after, and it ſeldom fails.

IV. Overflowing of the menſes is another accident incidental to child bed women.

1 Take ſhepherd's purſe, either boiled in any convenient liquor, or dried and beaten into powder, and it will be an

admirable remedy to ſtop them, this being eſpecially appropriated to the privities.

2. The flowers and leaves of brambles, or either of them being dried and beaten into powder, and a dram of them taken every morning in a ſpoonful of red wine, or in the decoction of the leaves of the ſame (which perhaps is much better;) is an admirable remedy for the immoderate flowing of the terms in women

V. Excoriations, bruiſes and rents, of the lower part of the womb, are often occaſioned by the violent diſtention and ſeparation of the four caruncles in a woman's labor. For the healing whereof,

As ſoon as the woman is laid, if there be only ſimple contuſions and exoriations, let the anodyne cataplaſm, formerly directed, be applied to the lower parts to eaſe the pain, made of the yolks and whites of new laid eggs, and oil of roſes boiled a little over warm embers, continually ſtirring it till it be equally mixed, and then ſpread upon a fine cloth, it muſt be applyed very warm to the bearing place for five or ſix hours, and when it is taken away, lay ſome fine rags, dipped in oil of St. John's wort twice or thrice a day, alſo, ſome foment the parts with barley water and honey of roſes to cleanſe them from the excrements which paſs. When the woman makes water, let them be defended with fine rags, and thereby hinder the urine from cauſing ſmart and pain.

VI. The curdling and clotting of the milk is another accident that often happens to women in childbed; for, in the beginning of child bed the woman's milk is not purified, becauſe of thoſe great commotions her body ſuffered during her labor, which affected all the parts, and it is then mixed with many other humors. Now this clotting of milk does, for the moſt part, proceed from the breaſts not being fully drawn, and that either becauſe ſhe hath too much milk, and that the infant is too ſmall and weak to ſuck all, or becauſe ſhe doth not deſire to be a nurſe, for the milk in thoſe caſes remaining, in the breaſt after concoction without being drawn, looſeth the ſweetneſs and the balſamic quality it had, and by reaſon of the heat it acquires and the too long ſtay it makes there, it ſours, curdles, and clots as we ſee runnet put into ordinary milk turns it into curds. This curdling of the milk may be alſo cauſed by having taken a great cold, and not keeping the breaſts covered.

But from what cauſe ſoever this curdling of the milk proceeds the moſt certain remedy is, ſpeedily to draw the breaſts until they are emitted and dried. But in regard the infant, by reaſon of its weakneſs cannot draw ſtrong enough, it will be proper to get another woman to draw her breaſts until the milk come freely, and then ſhe may give her child ſuck. And that ſhe may not afterwards be troubled with a ſurpluſage of milk, ſhe muſt eat ſuch diet as gives but little nouriſhment, and keep her body open.

But if the caſe be ſuch that the woman neither can nor will be a nurſe, it is then neceſſary to empty the body by bleeding in the arm; beſides drawing down the humors, by ſtrong clyſters

and bleeding in the foot, nor will it be amiſs to purge gently; and to digeſt, diſſolve and diſſipate the curdled milk, apply the cataplaſm of pure honey, or uſe the following liniment.

A Liniment to ſcatter and diſſipate the milk.

That the milk flowing back to the breaſts may without offence be diſſipated uſe this ointment: "Take pure wax two ounces, linſeed oil half a pound; when the wax is melted, let the liniment be made wherein linen cloths muſt be dipped, and laid upon the breaſt; and when it ſhall be diſcuſſed, and pains no more, let other linen cloths be dipped, in the diſtilled water of acorns, and put upon them."

Note, That the cloths dipped in the diſtilled water of acorns, muſt be uſed only by thoſe who cannot nurſe their own children; but if a ſwelling in the breaſts of thoſe who give ſuck, ariſes from abundance of milk, and threatens an inflamation, uſe the former ointment, but abſtain from uſing the diſtilled water of acorns.

CHAP. VIII.

Directions for nurſes in ordering new born children.

HAVING in the former chapter ſhewn how the lying in woman ſhould be ordered, it is now high time to take care of the infant, to whom the firſt ſervice that ſhould be performed for it, is the cutting of the navel ſtring of which I have ſpoken at large before.

SECT. I. *What is to be done to the new born infant after cutting the navel ſtring.*

WHEN the child's navel ſtring has been cut according to the rules before preſcribed, let the midwife preſently cleanſe it from the excrements and filth it brings into the world with it, of which ſome are within the body, as the urine in the bladder, and the excrement found in the guts; and others without, which are thick, whitiſh and clammy, proceeding from the ſlimineſs of the waters; There are children ſometimes ſo covered over with this, that one would ſay they are rubbed over with ſoft cheeſe, and ſome women are of ſo eaſy a belief, that they really think it is ſo, becauſe they had eaten ſome while they were with child. From theſe excrements let the child be cleanſed with wine and water a little warmed, waſhing every part therewith, but chiefly the head becauſe of the hair, alſo the folds of the groins, armpits, and the cods or privities; which parts muſt be gently cleanſed with a linen rag or ſoft ſponge dipped in this lukewarm wine. If this clammy or viſcious excrement ſtick ſo cloſe that it will not be eaſily waſhed off from thoſe places, it may be fetched off with the oil of ſweet almonds, or a little freſh butter melted with wine, and afterwards well dried off. She muſt alſo make tents of fine rags, and wetting them in this liquor, clear the ears and noſtrils; but for the eyes, wipe them only with a dry ſoft rag, not dipping it in the wine, leſt it ſhould make them ſmart.

The child being thus waſhed and cleanſed from its native blood and impurities which attended it into the world, it muſt, in the next place be ſearched to ſee whether all things be right about it, and that there is no fault or diſlocation; whether its

noſe be ſtraight or its tongue tied, whether there be any bruiſe or tumor on the head, whether the mould be not overmotten; alſo whether the ſcrotum, if a boy, be not blown up and ſwelled; and in ſhort, whether it has ſuffered any violence in any part of its body, and whether all the parts be well and duly ſhaped, that ſuitable remedies may be applied, if any thing be found not right. Nor is it enough that all be right without, and the outſide of the body cleanſed, but ſhe muſt chiefly obſerve whether it diſchargeth the excrements retained within, and whether the paſſages be open, for ſome have been born without having them perforated; therefore let her examine whether the conduit of the urine and ſtool be clear, for want of which ſome have died, not being able to void their excrements, becauſe timely care was not taken at firſt. As to the urine, all children, males and females, do make water as ſoon as they are born, if they can, eſpecially when they feel the heat of the fire, and ſometimes alſo the excrements, but not ſo ſoon as the urine. If the infant does not ordure the firſt day, then put up into its fundament a ſmall ſuppoſitory, to ſtir it up to be diſcharged, that it may not cauſe painful gripes by remaining ſo long in its belly. A ſugar almond may be proper for this purpoſe anointed over with a little boiled honey, or elſe a ſmall piece of caſtile ſoap rubbed over with freſh butter; ſhe may alſo give the child, to this purpoſe, a little ſyrup of roſes or violets at the mouth, mixed with ſome oil of ſweet almonds drawn without a fire, anointing the belly alſo with the ſame oil or a little freſh butter.

The midwife having thus waſhed and cleanſed the child, according to the before mentioned directions, let her begin to ſwaddle in ſwathing choths, and when ſhe dreſſes the head, let her put ſmall rags behind the ears to dry up the filth which uſually engenders there, and alſo in the folds of the armpits and groins, and ſo ſwathe it, having wrapped it up warm in bed blankets; only take care that they ſwathe not the child too ſtraight, eſpecially about the breaſt and ſtomach, that it may breathe the more freely, and not be forced to vomit up the milk it ſucks, becauſe the ſtomach cannot be ſufficiently extended to contain it; therefore, let its arms and legs be wrapped in its bed ſtretched and ſtraight, and ſwathed to keep them ſo, viz. the arms along its ſides, and its legs equally both together, with a little of the bed between them, that they may not be galled by rubbing each other; let the head be kept ſteady and ſtraight, with a ſtay faſtened on each ſide of the blanket, and then wrap the child up in mantles and blankets to keep it warm. This ſwathing of the infant is very neceſſary, to give its body a ſtraight figure which is moſt decent and proper for a man, and to accuſtom him to keep upon his feet, and not walk upon all four, as moſt other animals do.

CHAP. IX.

NEW-BORN children are ſubject to ſo many diſtempers that daily experience ſhews us, there are not above half the children that are born who live till they are three years old; which is occaſioned by the tenderneſs of their bodies and feebleneſs of their age, which hinders them from expreſſing the in-

commodities they labor under, any otherways than by their cries. The buſineſs of this chapter therefore will be to diſcover the indiſpoſitions to which they are ſubject, with the remedies proper for them.

SECTION I.

Of Gripes and pains in the bellies of young Children.

THIS I mention firſt, as it is often the firſt and moſt common diſtemper which happens to little infants after their birth, many children being ſo troubled and pained therewith, that they cry night and day, and at laſt die of it. This comes, for the moſt part, from the ſudden change of their nouriſhment, for having always received it from the umbilical veſſels whilſt in their mother's womb they come to change, on a ſudden, not only the manner of receiving it, but the nature and quality of what they receive as ſoon as they are born, for inſtead of purified blood only, conveyed to them by means of the umbilical vein, they are now obliged to be nouriſhed with their mother's breaſt milk, which they ſuck with their mouths, and from which are engendered many excrements, cauſing gripes and pains, and that not only becauſe it is not ſo pure as the blood with which it was nouriſhed in the womb but becauſe the ſtomach and inteſtines cannot yet make a good digeſtion. It is alſo cauſed ſometimes by a tough phlegm, and ſometimes by the worms; for phyſicians affirm, that worms have been bred in children even in their mother's belly.

The remedy therefore muſt be ſuited to the cauſe; if it proceed from the too ſudden changes of nouriſhment, the remedy muſt be to forbear giving the child ſuck for ſome days leſt the milk be mixed with phlegm; and at firſt it muſt ſuck but little until it be accuſtomed to digeſt it. If it be the excrements in the inteſtines, which by their long ſtay increaſe theſe pains, give them at the mouth a little oil of ſweet almonds, and ſyrup of roſes. If it be worms lay a cloth dipped in oil of wormwood, mixed with ox gall, upon the belly for a ſmall cataplaſm, the powder of rue and wormwood, coloquintida, alloes, the ſeeds of citron, incorporated with ox gall, and the powder of lupines. Or, give it oil of ſweet almonds with ſugar candy, and a ſcruple of annis ſeed; it purges new born babes from green choler and ſtinking phlegm, and if it be given with ſugar pap it allays the griping pains of the belly; alſo anoint the belly with oil of dill, or pellitory ſtamped with oil of camomile to the belly.

SECTION II.

Of weakneſs in new born Infants.

WEAKNESS is an accident that many children bring into the world along with them, and is often occaſioned by the labor of the mother; by the violence and length whereof they ſuffer ſo much, that they are born with great weakneſs, and many times it is difficult to know whether they are alive or dead, their body appearing ſo ſenſeleſs, and their face ſo blue and livid, that they ſeem to be quite choaked; and, even after ſome hours, their ſhewing ſigns of life is attended with ſo much weakneſs, that it looks like a return from death, and that they are ſtill upon the borders of that kingdom.

In this caſe the beſt way to help the infant is to lay him ſpeedily in a warm bed and blankets, and carry him to the fire, and then let the midwife ſup a little wine, and ſpout it into his mouth repeating it often, if there be occaſion. Let her apply linen to the breaſt, and belly, dipped in wine, and then let the face be uncovered that he may breathe more freely; alſo let the midwife keep its mouth a little open, cleanſe the noſtrils with ſmall linen tents dipped in white wine, that ſo he may receive the ſmell of it, and let her chafe every part of his body well with warm cloths, to bring back the blood and ſpirits, which being retired inward through weakneſs often puts him in danger of being choaked. By the application of theſe means the infant will inſenſibly recover ſtrength and begin to ſtir his limbs by degrees and, at length to cry, which though it be but weakly at firſt, yet afterwards as he breathes more freely, he will cry ſtronger and ſtronger.

Section III.

Of the fundament being cloſed up in a new born Infant.

ANOTHER effect that new born infants are liable to, is to have their fundaments cloſed up, by means whereof they can neither evacuate the new excrements engendered by the milk they ſuck, nor that which was amaſſed in their inteſtines, whilſt in their mother's belly, which is certainly mortal without a ſpeedy remedy. There have been ſome female children who have had their fundaments quite cloſed, and yet have voided the excrements of the guts by an orifice, which nature, to ſupply that defect, had made within the neck of the womb.

For the cure or remedy of this, we muſt notice that the fundament is cloſe two ways; either by a ſingle ſkin, through which one may diſcover ſome black and blue marks, proceeding from the excrements retained, which of one touch with the finger, there is a ſoftneſs felt within, and thereabouts it ought to be pierced; or elſe it is quite ſtopped by a thick fleſhy ſubſtance, in ſuch ſort that there appears nothing without by which its true ſituation may be known. When there is nothing but the ſingle ſkin which makes the cloſure, the operation is very eaſy, and the child may do very well; for then an apertion or opening may be made with a ſmall inciſion knife, croſs ways, that it may the better receive a round form, and that the place afterwards may not grow together taking great care not to prejudice the ſphincter or muſcle of the Rectum. The inciſion being thus made, the excrements will certainly have iſſue. But if, by reaſon of their long ſtay in the belly, they are become ſo dry that the infant cannot void them, then let a ſmall clyſter be given to moiſten and bring them away; afterwards put a linen tent into the new made fundament, which at firſt had beſt be anointed with honey of roſes, and towards the end with a drying cicatrizing ointment, ſuch as Unguentum, album, or Pomphelix, obſerving to cleanſe the infant of his excrements, and dry it again as ſoon and as often as he evacuates them that ſo the apertion may be prevented from turning it to a malignant ulcer.

But now if the fundament be ſtopped up in ſuch a manner that neither mark nor appearance can be either ſeen or felt, then the

operation is so much more difficult; and even when it is done, the danger is much more of the infant's escaping it. And then if it be a female, and that it sends forth its excrements by the way I have mentioned before, it is better not to meddle, than by endeavoring to remedy an inconvenience to run an extreme hazard of the infant's death. But when there is no vent for the excrements without which death is unavoidable, there the operation is justifiable.

The operation in this case must be thus; let the operator, with a small incision knife that hath but one edge, enter into the void place, and turning the back of it upwards within half a finger's breadth of the child's rump, which is the place where he will certainly find the intestine, let him thrust it forward, that it may be open enough to give free vent to the matters there contained, being especially careful of the sphincter; after which, let the wound be dressed according to the method directed.

SECT. IV. *Of the Thrush or Ulcer in the mouth of an Infant.*

THE thrush is a distemper that children are very often subject to, and it arises from bad milk, or from foul humors in the stomach; for sometimes, though there be no ill quality in the milk itself, yet it may corrupt in the child's stomach because of its weakness or some other indisposition, in which, acquiring an acrimony instead of being well digested, there arise from thence biting vapors, which forming a thick viscosity, do thereby produce this distemper.

It is often difficult; as physicians tell us, because it is seated in hot and moist places, where the putrefaction is easily augmented, and for that, the remedies applyed cannot lodge there, being soon washed away by spittle. But if they arise from too hot a quality in the nurse's milk, care must be taken to temper and cool, prescribing her cool diet, bleeding and purging her also, if there be occasion.

Take lentiles husked, powder them and lay it upon the child's gums; or take melidium in flower, half an ounce, and with oil of roses make a liniment. Also wash the child's mouth with barley and plantain water, and honey of roses, or syrup of dry roses, mixing them with a little verjuice, or juice of lemons as well to loosen and cleanse the viscious humors which cleave to the inside of the child's mouth, as to cool those parts which are already over heated. This may be done by means of a small fine rag fastened to the end of a little stick, and dipped therein, wherewith the ulcers may be gently rubbed, being careful not to put the child to too much pain, lest an inflamation make the distemper worse. The child's body must be also kept open, that the humors being carried to the lower parts, the vapors may not ascend, as it is usual for them to do, when the body is costive, and the excrements too long retained. If the ulcers appear malignant, let such remedies be used as do their work speedily, that the evil qualities that cause them being thereby instantly corrected, their malignity may be prevented; and in this case touch the ulcers with plantain waters sharpened with the spirits of vitriol, for the remedy must be made sharp, according to the

malignity of the diſtemper. It will not be unneceſſary to purge theſe ill humors out of the whole habit of the child, by giving half an ounce of ſuccory with rheubarb.

SECTION V. *Of pain in the ears, Inflamation, moiſture, &c.*

THE brain in infants is very moiſt and hath many excrements which nature cannot ſend out at its proper paſſages; they get often to the ears, and there cauſe pains, flux of blood, with inflamation, and matter with pain: and in children is hard to be known, having no other way to make it known but by conſtant crying; you will alſo perceive them ready to feel their ears themſelves, but will not let others touch them if they can help it: and ſometimes you may diſcern the parts about the ears to be very red. Theſe pains, if let alone, are of dangerous conſequences, becauſe they bring forth watching and epilepſy, for the moiſture breeds worms there and fouls the ſpongy bones, and by degrees incurable deafneſs.

To prevent all thoſe ill conſequences, allay the pain with all convenient ſpeed, but have a care of uſing ſtrong remedies. Therefore only uſe warm milk about the ears, with the decoction of poppy tops, or oil of violets: to take away the moiſture, uſe honey of roſes, and let aquamellis be dropped into the ears; or take virgin honey half an ounce, red wine two ounces, allum, ſaffron, ſaltpeter, each a dram; mix them at the fire; or drop in hempſeed oil with a little wine.

SECTION. VI. *Of redneſs and Inflamation of the buttocks, groin and thighs of an infant.*

IF there be not great care taken to change and waſh the child's beds as ſoon as they are fouled with the excrements, and to keep the child very clean, their acrimony will be ſure to cauſe redneſs, and beget a ſmarting in the buttocks, groin and thighs of the child, which by reaſon of the pain, will afterwards be ſubject to inflamations, which follow the ſooner, through the delicacy and tenderneſs of their ſkin from which the outward ſkin of the body is in a ſhort time ſeparated and worn away.

The remedy of this is two fold; that is to ſay, firſt, to keep the child cleanly, and in the ſecond place, to take off the ſharpneſs of its urine. As to keeping it cleanly, ſhe muſt be a ſorry nurſe that needs to be taught how to do it, for if ſhe lets it but have dry, clean and warm beds and clouts, as often and ſoon as it has fouled and wet them, either by its urine or excrements, it will be ſufficient; and, as to the ſecond, the taking off the ſharpneſs of the child's urine, that muſt be done by the nurſe's keeping a cooling diet, that her milk may have the ſame quality; and therefore ſhe ought to abſtain from all things that may heat it. But beſides theſe, cooling and drying remedies are requiſite to be applied to the inflamed parts; therefore, let the parts be bathed with plantain water, with a fourth of lime water added to it, each time the child's excrements are wiped off; and if the pain be very great, let it only be fomented with luke warm milk. The powder of a poſt to dry it or a little mill duſt ſtrewed upon the parts affected, may be proper enough: and it is uſed by ſeveral women. Alſo Unguentum, Album, or Diapampholigos, ſpread upon a ſmall piece of leather in form of a plaiſter, will not be amiſs.

But the chief thing muſt be the nurſe's taking great care to wrap the inflamed parts with fine rags when ſhe opens the child, that thoſe parts may not be gathered and painned by rubbing them together.

SECTION VII. *Of Vomiting in young Children.*

VOMITING in children proceeds ſometimes from too much milk, and ſometimes from bad milk, and is often from a moiſt looſe ſtomach; for as dryneſs retains, ſo looſeneſs lets go. This is for the moſt part, without danger in children; for the ſtomach, not being uſed to meat and milk being taken too much, crudities are eaſily bred, or the milk is corrupted; and it is better to vomit theſe up than to keep them in; but if vomiting laſt long, it will cauſe an atrophy or conſumption for want of nouriſhment.

To remedy this, if from too much milk that which is emitted is yellow and green, or otherwiſe ill colored and ſtinking; in this caſe, mend the milk, as has been ſhewed before; cleanſe the child with honey of roſes, and ſtrengthen its ſtomach with ſyrup of milk and quinces made into an electuary. If the humor be hot and ſharp, give the ſyrup of pomegranates, currants and coral; and apply to the belly the plaiſter of bread, the ſtomach create, or bred dipped in hot wine; or take oil of maſtic, quinces, mint, wormwood, each half an ounce; of nutmegs by expreſſions, half a dram, chymical oil of mint, three drops. Coral hath an occult property to prevent vomiting, and is therefore hung about their necks.

SECTION VIII. *Of breeding Teeth in young Children.*

THIS is a very great, and yet neceſſary evil in all children, having variety of ſymptoms joined with it; they begin to come forth, not all at a time, but one after another, about the ſixth or ſeventh month; the fore teeth coming firſt, then the eye teeth, and at laſt of all the grinders; the eye teeth cauſe more pain to the child than any of the reſt, becauſe they have a very deep root, and a ſmall nerve, which hath communication to that which makes the eye move. In the breeding of their teeth, firſt they feel an itching in their gums, when they are pierced as with a needle, and pricked by the ſharp bones, whence proceed great pains, watching, and inflamation of the gums, fever, looſeneſs, and convulſions, eſpecially when they breed their eye teeth.

The ſigns when children breed their teeth, are theſe; 1. It is known by their time, which is uſually about the ſeventh month, 2. Their gums are ſwelled, and they feel a great heat there, with an itching, which makes them put their fingers in their mouth to rub them, from whence a moiſture diſtils down into the mouth, becauſe of the pain they feel there. 3. They hold the nipple faſter than before. 4. The gum is white where the tooth begins to come; and the nurſe in giving them ſuck finds the mouth hotter, and that they are much changed, crying every moment, and cannot ſleep, or but very little at a time. The fever that follows breeding of teeth comes from choleric humors, inflamed by watching, pain, and heat. And the longer teeth are breeding, the more dangerous it is, ſo that many in the breeding of them die of fevers and convulſions.

For remedy, two things are to be regarded; one is, to preſerve the child from the evil accidents that may happen to it by reaſon of the great pain; the other, to aſſiſt as much as may be the cutting of the teeth, when they can hardly cut the gums themſelves.

For the firſt of theſe, i. e. the preventing of theſe accidents to the child, the nurſe ought to take great care to keep a good diet, and to uſe all things that may cool and temper her milk; that ſo a fever may not follow the pain of the teeth. And to prevent the humor from falling too much upon the inflamed gums, let the child's belly be kept always looſe by gentle clyſters, if it be bound; though often times there is no need of them, becauſe they are at thoſe times uſually troubled with a looſeneſs, and yet for all that, clyſters may not be improper.

As to the other, which is to aſſiſt in cutting of the teeth, that the nurſe muſt do from time to time, mollifying and looſening them, by rubbing them with her finger dipped in butter or honey, to let the child have a virgin wax candle to chew upon; or anoint the gums with the mucilage of quince made with mallows water, or with the brains of a hare; alſo foment the cheeks with the decoction of Althea, and camomile flower and dill, or with the juice of mallows and freſh butter. If the gums are inflamed, add juice of nightſhade and lettuce. I have already ſaid the nurſe ought to keep a temperate diet. I will now add, that barley broth, water gruel, raw eggs, prunes, lettuce and endive, are good for her: but let her avoid ſalt, ſharp, biting and peppered meats, and wine.

SECTION IX. *Of the Flux of the belly, or looſeneſs in Infants.*

IT is very common for infants to have the flux of the belly, or looſeneſs, eſpecially upon the leaſt indiſpoſition; nor is it to be wondered at, ſeeing their natural moiſtneſs contributes ſo much thereto; and if it be not extraordinary violent, ſuch are in a better ſtate of health than thoſe that are bound. This flux, if violent proceeds from divers cauſes: as, 1 From breeding teeth, and is then commonly attended with a fever, in which the concoction is hindered, and the nouriſhment corrupted. 2. From watching. 3. From pain. 4. From ſtirring of the humors by a fever. 5 When they ſuck or drink too much in a fever. Sometimes they have a flux without breeding of teeth, from outward cold in the guts or ſtomach, that obſtructs concoction. If it be from teeth it is eaſily known, for the ſigns in breeding of teeth will diſcover it. If it be from external cold, there are ſigns of other cauſes. If from a humor flowing from the head, there are ſigns of a catarrh, and the excrements are frothy. If crude and raw humors are voided, there is wind, belching, and phlegmatic excrements. If they be yellow, green and ſtink, the flux is from a hot and ſharp humor. It is beſt in breeding of teeth when the belly is looſe, as I have ſaid before; but if it be too violent, and you are afraid it may end in a conſumption, it muſt be ſtopped; and if the excrements that are voided be black, attended with a fever, it is very bad.

The remedy in this caſe has a principal reſpect to the nurſe, and the condition of the milk, muſt chiefly be obſerved; the

nurſe muſt be cautioned that ſhe eat no green fruit, nor things of a hard concoction. If the child ſuck not, remove the flux with purges, ſuch as leave a blooding quality behind them: As ſyrup of honey, of roſes, or a clyſter. Take the decoction of millium, myrobolans, each two or three ounces, with an ounce or two of ſyrup of roſes, and make a clyſter. After cleanſing, if it proceed from a hot cauſe, give ſyrup of dried roſes, quinces, myrtles, coral, maſtic, hart's horn, red roſes, or powder of myrtles, with a little Sanguis, Draconis. Alſo anoint with oil of roſes myrtles, maſtic, each two drams, with oil of myrtles and wax, make an ointment. Or take red roſes, moulin, each a handful, cypreſs roots, two drams: make a bag, boil it in red wine and apply it to the belly. Or uſe the plaiſter of bread or ſtomach ointment. If the cauſe be cold, and the excrements white, give ſyrup of maſtic, and the quinces, with mint water. Uſe outwardly mint, maſtic, cummin; or, take roſe ſeeds an ounce, cummin and annis ſeed, each two drams; with oil of maſtic, wormwood, and wax, make an ointment.

SECTION X. *Of the Epilepſy and Convulſions in Children.*

THIS is a diſtemper that is the death of many young children, and proceeds from the brain firſt, as when the humors are bred in the brain that cauſe it, either from the parents, or from vapors, or bad humors, that twitch the membranes of the brain; it is alſo ſometimes cauſed from other diſtempers, and from bad diet; likewiſe the tooth ache, when the brain conſents, cauſes it, and ſo does a ſudden fright. As to the diſtemper itſelf, it is manifeſt, and well enough known where it is; and as to the cauſe whence it comes, you may know by the ſigns of the diſeaſe whether it comes from bad milk, worms, or teeth: if theſe are all abſent, it is certain that the brain is firſt affected; if it comes with the ſmall pox or meaſles, it ceaſeth when they come forth, if nature be ſtrong enough.

For the remedy of this grievous and often mortal diſtemper, give the following powder to prevent it to a child as ſoon as it is born: Take male piony roots, gathered in the decreaſe of the moon, a ſcruple, with leaf gold make a powder; or, take piony roots a dram, piony ſeads, miſletoe of the oak, elk's hoof, man's ſkull, amber, each a ſcruple, muſk two grains; make a powder. The beſt part of the cure is taking care of the nurſe's diet which muſt not be diſorderly by any means. If it be from corrupt milk, provoke a vomit, to do which, hold down the tongue, and put a quil dipped in ſweet almonds down the throat. If it comes from worms give ſuch things as will kill the worms. If there be a fever, reſpect that alſo, and give coral ſmaraged, and elk's hoof. In the fit give epileptic water, as lavander water, and rub with oil of amber, or hang a piony root, elk's hoof, and ſmaraged coral, about the neck.

As to a convulſion, it is when the brain labors to caſt out that which troubles it: the matter is in the marrow of the back, and fountain of the nerves; it is a ſtubborn diſeaſe and often kills.

For the remedy whereof, in the fit waſh the body, eſpecially the back bone, with Decoction of Althæa, lily roots, piony and

camomile flowers, and anoint it with man's and goose grease, oils of worms, oris, lilies, turpentine, mastic, storax and calamint. The sunflower is also very good, boiled in water, to wash the child.

THE

EXPERIENCED MIDWIFE.

PART II.

Containing proper and safe Remedies for curing of all those distempers that are peculiar to the Female Sex, and especially those that have Obstructions to the bearing of Children.

HAVING finished the first part of this book, and I hope therein amply made good my promise to the reader I am now come to treat of the distempers peculiar to the female sex: in which it is not my design to enlarge, or to treat of all the distempers they are incident to, but those only to which they are most subject, when in a breeding condition, and that keep them from being so: for each of which distempers I have laid down such proper and safe remedies, as, with the divine blessing, may be sufficient to repel them; and since as amongst all the diseases to which human nature is subject, there is none that more diametrically opposes the very end of our creation, and the design of nature in the formation of different sexes, and the power thereby given us for the work of generation, than that of sterility or barrenness, which, where it prevails, renders the most accomplished midwife, but an useless person, and destroyes the design of our book; I think therefore barrenness is an effect that deserves our first consideration.

CHAP. I.

Of barrenness; its several kinds, with proper remedies against it; and the Signs of insufficiency both in men and women.

SECTION I. *Of barrenness in general.*

AS there is no general rule but will admit of some exception, against this second part; for though I have promised to treat herein only of diseases peculiar to the female sex, yet this chapter will engage me to speak of a defect in men, barrenness being an effect incident to them also; and therefore it is necessary to be handled with respect to men as well as women, that without treating of it so, I shall not be able to make good the old proverb, of setting the saddle on the right horse.

Having promised this, and thereby anticipated an objection, I shall now proceed to the subject of this chapter, which is barrenness.

Barrenness is either natural or accidental

Natural barrenness is, when a woman is barren, though the instruments of generation are perfect both in herself and husband, and no prepostorous or diabolical course used to cause it; and neither age nor disease, or any natural defect hindering,

and yet the woman remains naturally barren, and conceives not.

Now this may proceed from a natural cauſe: for if the man and woman be of one complexion, they ſeldom have children; and the reaſon is clear, for the univerſal courſe of nature being formed by the Almighty of a compoſition of contraries, cannot be increaſed by a compoſition of likes; and therefore, if the conſtitution of the woman be hot and dry as well as the man, there can be no conception; and if, on the contrary, the man ſhould be of a cold and moiſt conſtitution as well as the woman, the effect would be the ſame; and this barrenneſs is purely natural. The only way to help it is for people before they marry to obſerve each others conſtitution and complexion, if they deſign to have children. If their complexions and conſtitutions be alike, they are not fit to come together, for the diſcordant nature makes the only harmony in the work of generation.

Another natural cauſe of barrenneſs is want of love between the man and wife. Love is that vital principle that ought to inſpire each organ in the act of generation, or elſe 'twill be but ſpiritleſs and dull; for if their hearts be not united in love, how ſhould their ſeed unite to cauſe conception; and this is evidently evinced in that there never follows conception on a rape: therefore if men and women deſign to have children, let them live ſo that their hearts as well as their bodies may be united, or elſe they may miſs of their expectations.

A third cauſe of natural barrenneſs is virgins letting blood in the arm before their natural courſes come down, which is uſually in the fourteenth or fifteenth year of their age; ſometimes perhaps before the thirteenth but never before the twelfth. And becauſe uſually they are out of order and indiſpoſed before their purgations come down, their parents run to the doctor to know what is the matter, and he ſtraight way opens a vein in the arm, as if it was fulneſs of blood which was the cauſe of offending, and this makes her well at preſent; and when the young virgin happens to be in the ſame diſorder again, the mother ſtraight runs to the ſurgeon, and he directly uſes the ſame remedy; and by theſe means the blood is diverted from its proper channel, that it comes not down the womb as in another woman; and ſo the womb dries up, and the woman is forever barren. The way to prevent this is to let no virgin blood in the arm before her courſes come down well; but if there be occaſion, let her blood in the foot; for that will bring the blood downwards, and by that means provoke the menſtrues to come down.

Another cauſe of natural barrenneſs is the debility in copulation; if perſons perform not that act with all the heat and ardor that nature requires, they may as well let it alone, and expect to have children without it, for frigidity and coldneſs never produce conception. Of the cure of this we will ſpeak by and by, after I have ſpoken of accidental barrenneſs, which is what is occaſioned by ſome morbific matter or infirmity upon the body, either of the man or woman, which being removed, they become fruitful. And ſince (as I have before noted) the firſt and

great law of the creation was to increaſe and multiply, and barrenneſs is the direct oppoſition to the law, and fruſtrates the end of our creation; and that it is a great affliction to divers to be without children, and often cauſes man and wife to have hard thoughts of one another, each party thinking the cauſe not in them. I ſhall here, for the ſatisfaction of well meaning people, ſet down the ſigns and cauſes of inſufficiency both in men and women, premiſing this firſt, that when people have no children, they muſt not preſently blame either party, for neither may be in fault, but perhaps God ſees it not good (for reaſons beſt known unto himſelf) to give them any; of which we have divers inſtances in hiſtory.—And though the Almighty in the production of nature, works by natural means, yet where he withholds his bleſſing, natural means are ineffectual: for it is the bleſſing which is the power and energy by which nature brings forth her productions.

SECT. II. *Signs and cauſes of Inſufficiency in men.*

ONE cauſe may be in ſome viciouſneſs in the yard, as if the ſame be crooked, or any ligaments thereof diſtorted or broken, whereby the ways and paſſages through which the ſeed ſhould flow, come to be ſtopped or vitiated.

Another cauſe may be too much weakneſs of the yard, and tenderneſs thereof, ſo that it is not ſtrongly enough erected to inject ſeed into the womb; for the ſtrength and ſtiffneſs of the yard very much conduce to conception, by reaſon of the forcible injection of the ſeed.

Alſo if the ſtones have received any hurt, ſo that they cannot exerciſe the proper gift in producing ſeed, or if they be oppreſſed with any inflamation or tumor, wound or ulcer, or draw up within the belly, and not appearing outwardly theſe are ſigns of inſufficiency and cauſes of barrenneſs.

Alſo a man may be barren by reaſon of the defect of ſeed; as firſt, if he caſt forth no ſeed at all, or leſs in ſubſtance than is needful. Or, ſecondly if the ſeed be vicious, or unfit for generation. as on the one ſide, it happens in bodies that are groſs and fat, the matter of it being defective, and on the other ſide too much leanneſs, or continual waſting of conſumption of body deſtroys the ſeed; nature turning all the matter and ſubſtance thereof into nutriment of the body.

Too frequent copulation is alſo one great cauſe of barrenneſs in men; for it attracteth the ſeminal moiſture from the ſtones before it is ſufficiently prepared and concocted; ſo if any one by daily copulation do exhauſt and draw out all the moiſture of the ſeed, then do the ſtones draw the moiſt humors from the ſuperior veins into themſelves; and ſo having but little blood in them, they are forced of neceſſity to caſt it out raw and unconcocted, and thus the ſtones are violently deprived of the moiſture of their veins, and the ſuperior veins from all the other parts of the body for their proper nouriſhment, thereby depriving the body of its vital ſpirits. And therefore no wonder that thoſe that uſe immoderate copulation are very weak in their bodies; ſeeing their whole body is thereby deprived of their beſt and pureſt blood, and of the ſpirit, inſomuch that many who

have been too much addicted to that pleasure, have killed themselves in the very act, and therefore it is no wonder if such unconcocted and undigested seed be unfit for generation.

Gluttony, drunkenness, and the other excesses, do also much hinder men from fruitfulness, and make them unfit for generation.

But among other causes of barrenness in men, this also is one that makes them barren, and almost of the nature of eunuchs, and that is the incision or the cutting of their veins behind their ears, which in case of distempers is oftentimes done; for according to the opinion of most physicians and anatomists, the seed flows from the brain by those veins behind the ears more than from any other part of the body. From whence it is very probable, that the transmission of the seed is hindered by the cutting of the veins behind the ears, so that it cannot descend at all to the testicles, or come thither very crude and raw. And thus much for the signs and causes of barrenness in men.

SECTION III. *Signs and Causes of Insufficiency, or Barrenness in Women.*

ALTHOUGH there are many causes of barrenness of women, yet the chief and principal are internal, respecting either the privy parts, the womb, or menstruous blood.

Therefore Hippocrates saith (speaking of either easy or difficult conception of women) the first consideration is to be had of their species, for little women are more apt to conceive than great; slender than gross; white and fair, than ruddy and high colored; black than wane; those that have their veins conspicuous are more apt to conceive than others; but to the very flesh is evil; to have great swelled breasts is good.

The next thing to be considered, is the monthly purgations, whether they have been duly every month, and whether they flow plentifully, and are of good color, and whether they have been equal every month.

Then the womb or place of conception is to be considered, it ought to be clean, sound, dry and soft: not retracted or drawn up; not prone, nor descending downwards, nor the mouth thereof turned awry nor too close shut. But to speak more particularly:

The first parts to be spoken of are the pudenda, privities, and the womb; which parts are shut and inclosed, either by nature or against nature; and from hence such women are called imperfores; and in some women the mouth of their womb continues compressed, or closed up, from the time of their birth, until the coming down of their courses, and then on a sudden when their terms press forward to purgation, they are molested with great and unusual pains; some of these break of their own accord, others are dissected and opened by physicians, others never break at all, and it brings death.

And all these Aetius particularly handles, shewing that the womb is shut three manner of ways which hinders conception. And the first is, when the lips of the pudenda grow or cleave together; the second is, when there are certain membranes growing in the middle part of the matrix within; the third is,

when (tho' the lips and bofom of the pudenda may appear fair and open) the mouth of the womb may be quite fhut up; all which are occafions of barrenneſs, in that they hinder both the uſe of man, the monthly courſes, and conception.

But among all the cauſes of barrenneſs in women, the greateſt is in the womb, which is the field of generation; and if this field be corrupt, it is in vain to expect any fruit, let it be ever ſo well ſown: for it may be unfit for generation, by reaſon of many diſtempers to which it is ſubject: as for inſtance, over much heat and over much cold; for women, whoſe wombs are two thick and cold, cannot conceive, becauſe cold extinguiſhes the heat of the human ſeed. Immoderate moiſture of the womb alſo deſtroys the ſeed of man, and makes it ineffectual, as corn ſown in ponds and marſhes: and ſo does over much dryneſs in the womb, ſo the ſeed periſheth for want of nouriſhment. Immoderate heat of the womb is alſo a cauſe of barrenneſs, for it ſcorcheth up the ſeed, as corn ſown in drought of ſummer; for immoderate heat hurts all the parts of the body, ſo as no conception can live in the woman. And when unnatural labors are engendered, as too much phlegm, tympanies, wind, water, worms, or any ſuch evil humors abounding contrary to nature, it cauſes barrenneſs; as does all the terms not coming down in due order, as I have already ſaid.

A woman may have other accidental cauſes of barrenneſs (at leaſt ſuch as may hinder her conception) as ſudden frights, anger, grief and pertubation of the mind; too violent exerciſe, as leaping, dancing, running after copulation, and the like. But I will now add ſome ſigns by which theſe things may be known.

If the cauſe of barrenneſs be in the man through over much heat in his ſeed, the woman may eaſily feel that in receiving it.

If the nature of the womb be too hot and ſo unfit for conception, it will appear by her having her terms very little, and the color inclining to yellowneſs; ſhe is alſo very haſty, choleric, and crafty, her pulſe beats very ſwift, and ſhe is very deſirous of copulation.

If you would know whether the defect is in the man or the woman, ſprinkle the man's urine upon a lettuce leaf, and the woman's upon another, and that which dries away firſt is unfruitful. Alſo, Take five wheaten corns, and ſeven beans, put them into an earthen pot, and let the party make water therein, if theſe begin to ſprout, after ſtanding ſeven days, then the party is fruitful, if not, they are barren whether it be man or woman. This is a certain ſign.

Some make this experiment of a woman's fruitfulneſs: They take myrrh, red ſtorax, and ſome odoriferous things and make a perfume, which the woman is to receive into the neck of the womb through a funnel: And if the woman feels the ſmoke aſcend, through her body to the noſe, then ſhe is fruitful, otherwiſe not. Some alſo take garlic and beat it, and cauſe the woman to lie on her back upon it, and if ſhe feel the ſcent thereof to her noſe, it is a ſign of fruitfulneſs.

Culpepper and others alſo give a great deal of credit to the following experiment.

Take a handful of barley, and ſteep half of it in the urine of the man, and the other half in the urine of the woman, for the ſpace of twenty four hours, and then take it out, and ſet each by itſelf, in a flower pot, or ſome other thing; water the man's every morning with his own urine, and the woman's with hers, and that which grows firſt, is the moſt fruitful; and if one grow not at all, that party is naturally barren.

But, now, having ſpoken enough of the diſeaſe, it is high time to aſſign the cure.

If barrenneſs proceeds from ſtoppage of the menſes, let the woman ſweat, for that opens the parts; and the beſt way to ſweat is in a hot houſe. Then let the womb be ſtrengthened by drinking a draught of white wine, wherein a handful of ſtinking arrack, firſt bruiſed, has been boiled. For by a ſecret magnetic virtue it ſtrengthens the womb, and by a ſympathetic quality removes any diſeaſe thereof. To which add alſo a handful of vervain, which is very good to ſtrengthen both the womb and head, which are commonly afflicted together by ſympathy. Having uſed theſe two or three days, if they come not down; take of calac, mint, pennyroyal, thyme, betony, dittany, feverfew, burnet, mugwort, ſage, piony roots, juniper berries, half a handful of each, or ſo many as can be got, let all theſe be boiled in beer, and drank for her ordinary drink.

Take one part of the gentian root, two parts of centory, diſtil them with ale in an alembic, after you have bruiſed the gentian roots, and infuſed them well. This water is an admirable remedy to provoke the terms. But if you have not this water in readineſs, take a dram of centory, and half a dram of gentian roots bruiſed, boiled in poſſet drink, and drink a draught of it at night going to bed. Seed of wild navew beaten to powder, and a dram of it taken in the morning in white wine, alſo is very good; but if it do not do, you muſt be let blood in the legs. And be ſure you adminiſter your medicines a little before the full of the moon, or between a new and full moon, by no means in the wane of the moon; if you do, you will find them ineffectual

If barrenneſs proceed from the overflowing of the menſtrues, then ſtrengthen the womb, as you were taught, and afterwards anoint the reins of the back with oil of roſes, oil of myrtle, oil of quinces every night, and then wrap a piece of white baize about your reins, the cotton ſide next the ſkin, and keep the ſame always to it. But above all I recommend this medicine to you. Take comfrey leaves or roots, and blown woundwort, of each a handful: bruiſe them well, and boil them in ale, and drink a good draught of it now and then. Or take cinnamon, caſſia lignia, opium, of each two drams: myrrh, white pepper galbanum, of each one dram: diſſolve the gum and opium in white wine and beat the reſt into powder; then make it into pills, by mixing them together exactly, and let the patient take two pills every night going to bed, but let not the pills exceed fifteen grains.

If barrenneſs proceed from a flux of the womb, the cure muſt be according to the cauſe producing it, which may be known by its ſigns: for a flux of the womb being a continual diſtillation from it for a long time together, the color of what is voided ſhews what humor it is that offends: In ſome it is red, and that proceeds from blood putrified; In ſome it is yellow, and that denotes cholor: In others white and pale, and that denotes phlegm. If pure blood comes out, as if a vein were opened, ſome corroſion or gnawing of the womb is to be feared. All theſe are known by theſe ſigns.

The place of conception is continually moiſt with the humors, the face is ill colored, the party loaths meat, and breaths with difficulty, the eyes are much ſwolen, which is ſometimes without pain. If the offending humor be pure blood, then you muſt let blood in the arm, and the cephalic vein is fitteſt to draw back the blood, and then let juice of plantain and comfrey be injected into the womb. If phlegm be the cauſe, let cinnamon be uſed in all her meats and drinks, and let her take a little Venice treacle or mithridate every morning. Let her boil burnet, mugwort, featherfew and vervain, in all her broths. Alſo, half a dram of myrrh taken every morning is an excellent remedy againſt this mallady. If cholor be the cauſe, let her take burrage, bugloſs and roſes, endive and ſuccory roots, lettuce and white poppy ſeed, each a handful; boil theſe in white wine till one half be waſted; let her drink half a pint every morning, to which add ſyrup of peach flowers, and ſyrup of chicony, of each an ounce with a little rhubarb, and this will gently purge her. If it proceeds from putrefied blood, let her be blooded in the foot, and then ſtrengthen the womb as I have directed in ſtoping of the menſes.

If barrenneſs be occaſioned by the falling out of the womb, as ſometimes happens let her apply ſweet ſcents to her noſe, ſuch as civit, galbum, ſtorax calamitis, wood of aloes and other things of that nature; and let her lay ſtinking things to the womb, ſuch as aſſafœtida, oil of amber, or the ſmoke of her own hair burnt; for this is a certain truth, that the womb flies from all ſtinking, and cleaves to all ſweet things. But the moſt infallible cure is this, Take common burdock leaf (which you may keep dry all the year) apply this leaf to her head, and it will draw the womb upwards. In fits of the mother apply it to the ſoles of her feet, and it will draw the womb downwards. But ſeed beaten into powder draws the womb which way you pleaſe according as it is applied.

If barrenneſs proceed from a hot cauſe, let the party take whey and clarify it, then boil plantain leaves and roots in it and drink it for her ordinary drink. Let her alſo inject the juice of plantain into the womb with a ſyringe; If it be in winter, when you cannot get the juice, make a ſtrong decoction of the leaves and roots in water, and inject that up with a ſyringe; but let it be but blood warm, and you will find this medicine of great efficacy. And further, take often conſerve of roſes, cold lozenges made of tragacanth, the confections of traiſantali, frequently ſmell camphire, roſe water, and ſaun-

ders. It is alſo good to bleed the baſilica, or liver vein, and take 4 or 5 ounces of blood, and then uſe this purge. Take electuarum de epithimo.de ſucco roſarum, of each two drams and a half, clarified whey four ounces, mix them well together, and take it in the morning faſting; ſleep after it about an hour and a half, and faſt four hours after it And about an hour before you eat any thing, drink a good draught of whey: Alſo, take lilly water four ounces, mandrogory water one ounce, ſaffron half a ſcruple; beat the ſaffron to powder, and mix it with the waters, and drink them warm in the morning. Uſe this eight days together.

Some excellent REMEDIES *againſt Barrenneſs, and to cauſe fruitfulneſs.*

TAKE broom flowers, parſley ſeed, cummin, mugwort, featherfew, of each half a ſcruple; aloes half an ounce: India ſalt, ſaffron, of each half a dram; beat and mix them well together, and put it to five ounces of featherfew water warm, ſtop it up cloſe, and let it ſtand and dry in a warm place, and thus do two or three times one after another; then make each dram into ſix pills and take one of them every other day before ſupper.

For purging medicine againſt barrenneſs; take conſerve of benedicta lax, one quarter of an ounce: diapſillo. three drams; electuary de ſucco roſatum, one dram; mix them together with featherfew water and drink it in the morning betimes. About three days after the patient hath taken a purge, let her blood four or five ounces in the median or common black vein in the right foot; and then take, for five days one after another, filed ivory, a dram and a half in featherfew water; and during the time, let her ſit in the following bath an hour together, morning and night; Take wild yellow rapes, daucus, balſam wood and fruit, aſhkeys, of each two handfuls; red and white bhen, broom flowers, of each a handful; muſk three grains, amber, ſaffron, of each one ſcruple; boil all in water ſufficiently; but the muſk, ſaffron, amber, and broom flowers, muſt be put into the decoction after it is boiled and ſtrained.

A confection very good againſt barrenneſs; Take piſtachia, pingles, eringoes, of each half an ounce, ſaffron one dram, lignum aloes, galſingade, mace, balm flowers, red and white bhen each four ſcruples, ſhaven ivory, caſſia bark, each two ſcruples; ſyrup of confected ginger twelve ounces, white ſugar ſix ounces; decoct all theſe well together, in twelve ounces of balm water and ſtir it well together; then put to it muſk and amber, each a ſcruple: Take thereof the quantity of a nutmeg three times a day, in the morning, an hour before noon, and an hour after ſupper.

But if the cauſe of barrenneſs either in a man or woman, be through ſcarcity or diminution of the natural ſeed, then ſuch things are to be taken as do increaſe the ſeed, and incite or ſtir up to venery, and further conception, which I ſhall here ſet down, and conclude the chapter of barrenneſs.

For this, yellow rape ſeed baked in bread is very good; alſo young fat fleſh, not too much ſalted; alſo ſaffron, the ſails ſtin-

cus, and long pepper prepared in wine. But avoid four, sharp, doughy and slimy meats, long sleep after meat, with surfeiting and drunkenness, and as much as they can, keep themselves from sorrow.

These things following increase the natural seed and stir up venery, and recover the seed again when it is lost, viz. eggs, milk, rice boiled in milk, sparrow's brains, flesh bones and all; the bones and pizzles of bulls, bucks, rams, and bears; also cock stones, lamb stones, partridges, quails, and pheasants eggs, for this is an undeniable aphorism, that whatever any creature is addicted unto, they move or excite the woman or man that eats them to the like; and therefore partridges, quails, sparrows, &c being extremely addicted to venery, they work the same effect in those men and women that eat them. Also take notice that in what part of the body the faculty which you would strengthen lies, take the same part of the body of another creature, in whom the faculty is strong, as a medicine. As for instance, the procreative faculty lies in the testicles, therefore cock stones, lamb stones, &c. are proper to stir up venery. I will also give you another general rule; all creatures that are fruitful being eaten, make them fruitful that eat them; as crabs, lobsters, prawnes, pidgeons, &c. The stones of a fox dried and beaten to powder and a dram taken in the morning in sheep's milk; and the stones of a boar taken in the like manner are very good. The heart of a male quail carried about the man, and the heart of a female quail carried about the woman, causeth natural love and fruitfulness. Let them also that would increase their seed, eat and drink of the best as near as they can; for *fine cerere et libero frigit Venus,* is an old proverb, which is, Without good meat and good drink, Venus will be frozen to death.

Pottages are good to increase the seed, such as are made of beans, peas and lupines, and mix the rest with sugar. French beans, wheat sodden in broth, annis seeds, also onions stewed, garlicks, leeks, yellow rapes, fresh bugwort roots, oringo roots ginger confected, &c. Of fruits; hazle nuts, cypress nuts, pistachia almonds, and marmupane made thereof. Spices good to increase seed, are cinnamon, cardanum, galengal, long pepper, cloves, ginger, saffron, assafœtida, take a dram and a half in good wine, is very good for this purpose.

The weakness and debility of a man's yard being a great hindrance to procreation, let him to strengthen it, use the following ointments. Take wax, oil of bevercod, marjorum gentle, add oil of coslus, of each a like quantity, mix it into an ointment, and put to it a little musk and with it anoint the yard, cods, &c. Take of house emmets three drams, oil of white sesanum, oil of lilies of each an ounce; pound and bruise the ants, and put them to the oil, and let them stand in the sun six days, then strain out the oil, and add to it euphorbium one scruple, pepper and rue, of each one dram; mustard seed half a dram. Set this again all together in the sun two or three days, then anoint the instruments of generation therewith. So much for this chapter.

CHAP. II.

The diſeaſes of the Womb.

I HAVE already ſaid, that the womb is the field of generation; and if this field be corrupted, it is in vain to expect any fruit though it be never ſo well ſown; it is therefore not without reaſon, that I intend in this chapter to ſet down the ſeveral diſtempers to which the womb is obnoxious, and proper and ſafe remedies againſt them.

SECTION I. *Of the hot Diſtemper of the Womb.*

THIS diſtemper conſiſts in the exceſs of heat; for the heat of the womb is neceſſary for conception, but if it be too much it nouriſheth not the ſeed, but diſperſeth its heat, and hinders the conception; this preternatural heat is ſometimes from the birth, and makes them barren; but if it be accidental it is from hot cauſes that bring the heat and the blood to the womb; it ariſes alſo from medicines, and from too much hot meat, drinks and exerciſe. Thoſe that are troubled with this diſtemper have but few courſes, and thoſe yellow, black, burnt or ſharp, have hair betimes in their privities; they are very prone to luſt, and are ſubject to the headache, and abound with choler. And when the diſtemper is ſtrong upon them, they have but few terms, and out of order, being bad and hard to flow, and in time they become hypochondriacs, and for the moſt part barren, having ſometimes a frenzy of the womb.

The remedy is to uſe coolers, ſo that they offend not the veſſels that muſt be open for the flux of the terms. Therefore inwardly uſe coolers, ſuch as ſuccorys, endive, violets, water-lilies, ſorrel, lettuce, ſanders, and ſyrups, and conſerves made thereof. Alſo take conſerve of ſuccory, violets, water-lilies, burrage, each, an ounce; conſerve of roſes half an ounce, diamargaton frigid, diatriaſcantal, each half a dram; and with ſyrup of violets, or juice of citrons, make an electuary For outward applications make uſe of ointment of roſes, violets, water lilies, gourds, Venus narvel applied to the back and loins.

Let the air be cool, her garments thin, and her meat endive, lettuce, ſuccory and barley Give her no hot meats, nor ſtrong wine, unleſs mixed with water. Reſt is good for her, but ſhe muſt abſtain from copulation though ſhe may ſleep as long as ſhe will.

SECTION II. *Of the cold diſtemper of the Womb.*

THIS diſtemper is the reverſe of the foregoing, and equally an enemy to generation, being cauſed by cold quality abounding to exceſs, and proceeds from too cold air, reſt, idleneſs and cooling medicines. It may be known by an averſion to letchery; and taking no pleaſure in the act of copulation when they ſpend their ſeed. Their terms are phlegmatic, thick and ſlimy, and do not flow as they ſhould. The womb is windy, and the ſeed crude and wateriſh. It is the cauſe of obſtructions and barrenneſs, and hard to be cured.

For the cure of this diſtemper uſe this water: Take galangal, cinnamon, nutmeg, mace, cloves, each two drams; ginger cubebs, zedoary, cardanum, each an ounce; grains of Paradiſe,

long pepper, each half an ounce ; beat them and put them into ſix quarts of wine for eight days ; then add ſage, mint, balm, motherwort, each three handfuls. Let them ſtand eight days more, then pour off the wine, and beat the herbs and the ſpices, and then pour on the wine and diſtil them. Or you may uſe this : Take cinnamon, nutmegs, cloves, mace, ginger, cubebs, cardamums, grains of Paradiſe, each an ounce and a half, galengal ſix drams, of long pepper half an ounce, zedony five drams, bruiſe them, and add ſix quarts of wine : put them ino a cellar nine days, daily ſtirring them : then add of mint two handfuls, and then let them ſtand fourteen days, pour off the wine and bruiſe them, and then pour on the wine again, and diſtil them. Alſo anoint with oil of lilies, rue, angelica, bays, cinnamon, cloves, mace, and nutmeg. Let her diet and air be warm, her meat of eaſy concoction, ſeaſoned with annis ſeed, fennel, and thyme, and let her avoid raw fruits and milk diets.

SECTION III. *Of the inflation of the Womb*

THE inflation of the womb, is the ſtretching of it by wind, called by ſome the windy mole, the wind proceeding from a cold matter whether thick or thin, contained in the veins of the womb by which the weak heat thereof is overcome, and it either flows thither from other parts, or is gathered there by cold meats or drinks : cold air may be a procuring cauſe of it alſo, as lying in women are expoſed to it. The wind is contained either in the cavity of the veſſels of ſhe womb, or between the tunicles, and it may be known by the ſwelling in the region of the womb, which ſometimes reaches to the navel, loins, and diaphragma : and it riſes and abates as the wind increaſeth or decreaſeth. It differs from the dropſy, in that it never ſwells ſo high ; and that neither the phyſician nor midwife may take it for conception, let them obſerve the ſigns of women with child laid down in the firſt part of the book ; and if one ſign be wanting, they may ſuſpect it to be an inflamation, of which this is a farther ſign, that in conception the ſwelling ſtill increaſeth alſo, if you ſtrike upon the belly. in an inflation, there will be a noiſe, but not ſo in caſe there be a conception. It alſo differs from a mole, becauſe in that there is a weight and hardneſs in the belly; and when they move from one ſide to another, they feel a weight which moving ; but not ſo in this. If the inflation be without the cavity of the womb, the pain is greater and more extenſive, nor is there any noiſe, becauſe the womb is more pent up.

This diſtemper is neither of any long continuance, nor dangerous, if looked after in time, and if it be in the cavity of the womb is more eaſily expelled. To which purpoſe give her diaphonicon with a little caſtor and ſharp clyſters that expel wind. If this diſtemper happens to a woman in travail, let her not purge after delivery, nor bleed, becauſe it is from a cold matter ; but if it come after child bearing, and her terms come down ſufficiently, and that ſhe has fullneſs of blood, let the ſephæna vein be opened ; after which let her take the following electuary ; take conſerve of betony, roſemary, of each an ounce and a half ; candied eringoes, citron peels candied, each half an ounce, diachlum, galengal, each a dram, oil of annis ſeed ſix drops, and with

ſyrup of citrons make an electuary. For outward applications make a cataplaſm of rue, mugwort, camomile, dill, calimints, new penyroyal; thyme, with oil of rue, keir, and camomile; and let the following clyſters, to expel wind, be put into the womb: Take agnus, caſtus, rue, calamint, each an handful; annis ſeed, caſtus, cinnamon, each two drams, boil them in wine to half a pint. She may likewiſe uſe ſulphur, baths, and ſpaw waters, both inward and outward, becauſe they expel wind.

SECTION IV. *Of the dropſy of the Womb.*

THIS is another morbific effect of the womb, proceeding from water, as that before mentioned did from wind, by which the belly is ſo ſwelled, that it deceives many, cauſing them to think themſelves with child when indeed they are not. This is an unnatural ſwelling raiſed by the gathering together of waters, from moiſture mixed with the terms, and an evil ſanguification from the liver and ſpleen; alſo by immoderate drinking, or eating of crude meats; all which cauſing a repletion, do ſuffocate the native heat: It may alſo be cauſed by overflowing of the courſes, or by any other immoderate evacuation. The ſigns of this diſtemper, are the lower parts of the belly, with the privities puffed up and pained; the feet ſwell, the natural color of the face decays; the appetite is departed; the terms alſo are fewer, and ceaſe before their time; her breaſts are alſo ſoft, but without milk. This is diſtinguiſhed from a general dropſy, in that the lower parts of the belly are moſt ſwelled? neither does the ſanguificative faculty appear ſo hurtful, nor the urine ſo pale, nor the countenance ſo ſoon changed, neither are the ſuperior parts ſo extenuated, as in a general dropſy. But yet this diſtemper foretels the total ruin of the natural functions, by that ſingular conſent the womb hath with the liver, and therefore an evil habit of body or a general dropſy will follow.

For the cure of this diſeaſe, firſt mitigate the pain with fomentations, of mellilot, mallows, linſeed, camomile, and althæ, then let the humor be prepared with ſyrup of ſtoeſhus, calamint, mugwort, both ſorts, with the diſtilled waters, or decoction of nodder, marjorum, ſage, oringe, ſpeerage, penny royal, and betony; and let her purge with ſenna, agaric, rhubarb, and cliterian. Take calamints, mugwort, lovage roots, penny royal, each an handful; ſavila pugil; madder roots, angelica, of each an ounce; boil them in water, and ſweeten them with ſugar. Or, if ſhe like it better, make broths of the ſame. Alſo take ſpecierem diambree, diameſcidulcis, diacalamenti, diacinnimoni, diacimini, troce de myrrh, of each two drams, ſugar one pound; with betony water make lozenges, and let her take of them two hours before meals. Apply alſo to the bottom of the belly, as hot as can be endured, a little bag of camomile, cummin and mellilot boiled in oil of rue; and anoint the belly and privities with unguentum Agrippæ, mingling therewith oil of Iroes. Let the lower parts of the belly be covered with a plaiſter of bay berries, or with a cataplaſm made of cummin, camomile and briony roots, adding thereto cow's and goat's dung. For injection into the womb, take aſarum roots three drams, penny royal, cal-

imint, each half a handful, ſavin, a pugil, machoacan a dram; annis ſeed, cummin, each half a dram. Boil them and take ſix ounces ſtrained with oil of elder and orris, each an ounce; and inject it into the womb by a metrenchita; let the air be hot and dry. Moderate exerciſe may be allowed, but much ſleep is forbidden. She may eat the fleſh of partridges, larks, chickens, mountain birds, hares, conies, &c. and drink wine mixed with a little water.

SECTION V. *Of the inflamation of the Womb.*

THIS is a tumor poſſeſſing the womb, accompanied with unnatural heat, by obſtruction, and gathering together of corrupt blood; for the blood that comes to the womb, gets out of the veſſels into its ſubſtance and grows hot, putrefies, and cauſeth an inflammation, either all over, or in part, before or behind, above or below. This happens alſo by ſuppreſſion of the menſtrues, repletion of the whole body, immoderate copulation, often handling of the genitals, difficult child birth, vehement agitation of the body or by falls or blows. The ſigns of this inflammation are tumors with heat and pain in the region af the womb, ſtretching and heavineſs in the privities, alſo a pain in the head and ſtomach, with vomiting, coldneſs of the knees, convulſions of the neck, doting, trembling of the heart: and ſometimes ſtraitneſs of breath by reaſon of heat which is communicated to the diaphragma, or midriff; and the breaſts ſympathizing with the womb, are pained and ſwelled; but more particularly, if the fore part of the matrix be inflamed, the privities are grieved, and the urine is ſuppreſſed, or flows forth with difficulty; if it be behind, the loins and back ſuffer, and the belly is bound; if the inflammation be in the bottom of the womb, the pain is towards the navel; if the neck of the womb be affected, the midwife, putting up her finger, may feel the mouth of it retracted, and cloſed up, with a hardneſs about it. As to the prognoſticks of it, all inflammations of the womb are dangerous and ſometimes deadly. eſpecially if it be all over the womb: if the woman be with child ſhe rarely eſcapes, an abortion follows, and the mother dies.

As to the cure: firſt, Let the humors flowing to the womb be repelled; for the affecting of which after the belly hath been opened by the cooling clyſters, letting of blood will be needful: open therefore a vain in the arm, but have a care of bleeding in the foot, leſt thereby you draw more blood to the womb, but if it be from the terms ſtopt, you may. The opinion of Galen is, that the blood may be diverted by bleeding in the arm, or cupping the breaſts and that it may be by opening an ancle vein, and cupping upon the hips. Then purge gently with caſſia, rhubarb, ſenna, and mirobolans thus, take ſenna two drams, annis ſeed one ſcruple, mirobolans half an ounce, barley water a ſufficient quantity; make a decoction, diſſolve it in ſyrup of ſuccory, with rheubarb two ounces, pulp of caſſia half an ounce, oil of annis ſeed two drops and make a portion. At the beginning of the diſeaſe anoint the privities and reins with oil of roſes and quinces. Make plaſters of plantain, linſeed barley meal, melilot, fenugreek and white of egg; and if the

pain be vehement, add a little opium. For repellers and anodynes take Venus navel, purſlain, lettuce houſleek, vine leaves, eacha handful, boil them in wine; barley meal two ounces, pomegranate flowers two drams, boil a dram with oil of roſes, and make a poultice. Or take diacibilou ſimple two ounces, juice of Venus navel, and plantain each half an ounce; take of fenugreek, mallow roots, decocted figs, linſeed, barley meal, dove's dung, turpentine, each three drams; deer's ſuet half a dram, opium half a ſcruple, and with wax make a plaiſter. After it is ripe break it by the motion of the body, coughing, ſneezing, or elſe by cupping and peſſaries; as, Take rue half an handful, figs an ounce, pigeon's dung, orris root each half a dram; with wool make peſſary. After it is broken and the pains abate, then cleanſe and heal the ulcer with ſuch cleanſers as theſe, viz. Whey, barley water, honey, wormwood, ſmallage orris, birthwort, myrrh, turpentine, allum: Take new milk boiled a pint, honey half a pint, orris powder half an ounce, and uſe it very often every day. If it break about the bladder, uſe an emulſion of cold ſeeds, whey, and ſyrup of violets. Let her drink barley water, or clarified whey, and her meat be chickens, and chicken bread, boiled with endive, ſuccory, ſorrel, bugloſs and mallows.

SECTION VI. *Of Schirroſity and Hardneſs of the Womb.*

A SWELLING in the womb neglected, or not perfectly cured, often produces a ſchirroſity in the matrix, which is a hard inſenſible, unnatural ſwelling, cauſing barrenneſs, and begetting an indiſpoſition of the whole body. The immediate cauſe is a thick, earthy humor (as natural melancholy, for inſtance) gathered in the womb, and cauſing a ſchirrous without inflammation. It is a proper ſchirrous when there is neither ſenſe nor pain, and it is an improper ſchirrous when there is ſome little ſenſe and pain. This diſtemper is moſt uſual in women of a melancholy conſtitution, and alſo ſuch as have not been cleanſed from their menſes, or from the retention of the lochia, or after purging; it is likewiſe ſometimes cauſed by eating corrupt meat; or thoſe inordinate lodgings called pica, to which breeding women are often ſubject; and laſtly, it may alſo proceed from obſtructions and ulcers in the womb, or ſome evil effects in the liver and ſpleen. It may be known by theſe ſigns; If the effect be in the bottom of the womb, ſhe feels as it were a heavy burden repreſenting a mole, yet differing, in that the breaſts are attenuated, and the whole body alſo. If the neck of the womb be hardened, no outward humors will appear, the mouth of it is retracted, and touched with the finger, feels hard: nor can ſhe have the company of a man without great pains and prickings. This ſchirroſity or hardneſs is (when confirmed) incurable, and will turn into a cancer, or dropſy: and ending in a cancer, proves deadly; the reaſon of which is, becauſe the native heat in thoſe parts being almoſt ſmothered, it is hardly to be reſtored again.

For the cure of this, firſt prepare the humor with ſyrup of burrage, ſuccory, epicymum, and clarified whey; which being done, take of theſe pills following, according to the ſtrength of

the patient? take hiera picra, ſix drams and a half; agaric, lapiſlazuli, abluti ſalis Indœ, coloquintida, of each one dram and a half; mix them, and make pills. The body being purged, proceed to mollify the hardneſs as followeth; anoint the privities and the neck of the womb with the following ointment: take oil of capers, lilies, ſweet almonds, jeſſamin, each an ounce; mucilage, fenugreek, althæ, ointment of althæ, each ſix drams: amoniacum diſſolved in wine, an ounce, which with wax make into an ointment. Then apply below the navel diochylon fernelli; and make emulſions of figs, mugwort, mallows, pennyroyal, althæ, fennel roots, melilot, fenugreek, and linſeed boiled in water; but for injection, take bdellium diſſolved in wine, oil of ſweet almonds, lilies, camomile, each two ounces, marrow of veal bones, and hen's greaſe, each an ounce, with the yolk of an egg. The air muſt be temperate; and as for her diet, let her abſtain from all groſs, vicious and ſalt meats, ſuch as pork, fiſh, oil, cheeſe, &c.

SECTION VII *Of the ſtraightneſs of the Womb and its Veſſels.*

THIS being ſeated in the veſſels of the womb, and neck thereof is an obſtruction to the bearing of children, as it hinders both the flowing of the menſes and conception. The cauſe of this ſtraitneſs is thick and tough humors, that ſtop the mouth of the veins and arteries; theſe humors, are bred of groſs or too much nouriſhment: when the heat of the womb is ſo weak that it cannot attenuate the humor which, by reaſon thereof, either flow from the whole body, or are gathered into the womb. Now, the veſſels are made cloſer or ſtraiter ſeveral ways; ſometimes by inflammations, ſchirrous, or other tumors; ſometimes by compreſſions, or by a ſcar, or fleſh, or membrane, that grows after the wound. The ſigns by which this is known, are ſtoppage of the terms, not conceiving, crudities abounding in the body, which are known by particular ſigns; for if there was a wound, or the ſecundine was pulled out by force, phlegm comes from the wound. If ſtoppage of the terms be from an old obſtruction by humors, it is hard to be cured; if it is only from the diſorderly uſe of aſtringents it is more curable; if it be from a ſchirrous, or other tumors that compreſs or cloſe the veſſels, the diſeaſe is incurable.

For the cure of that which is curable, obſtructions muſt be taken away, phlegm muſt be purged, and ſhe muſt be let blood, as will be hereafter directed in the ſtoppage of the terms. Then uſe the following medicines; take of annis ſeed and fennel ſeed, each a dram; roſemary, pennyroyal, calamint, betony flowers, each an ounce; ceſtus, cinnamon, galengal, each half an ounce; ſaffron half a dram, with wine. Or, take aſparagus roots, parſley roots, each an ounce; pennyroyal, calamints, each a handful; wall flowers, dill flowers, each two pugils: boil, ſtrain, and add ſyrup of mugwort, an ounce and a half. For a fomentation, take pennyroyal, mercury calamint, marjoram, mugwort, each two handfuls; ſage, roſemary, bays, camomile flowers, each an handful; boil them in water, and foment the groin and the bottom of the belly, or let her ſit up to her na-

vel in a bath, and then anoint about the groin with oil of rue, lilies, dill, &c.

Section VIII.

Of the falling of the Womb.

THIS is another evil affect of the womb, which is both very troublesome, and also a hindrance to conception. Sometimes the womb falleth to the middle of the thighs, nay, almost to the knees, and it may be known then by its hanging out. Now that which causeth the womb to change its place is when the ligaments by which it is bound to the other parts are not in order for there are four ligaments, two above, broad and membraneous, that come from the peritoneum, and two below that are nervous round and hollow; it is also bound by the great vessels by veins and arteries, and to the back by nerves. Now the place is changed when it is drawn another way, or when the ligaments are loose, and it falls down by its own weight. It is drawn on one side when the menses are hindered from flowing, and the veins and arteries are full, namely those which go to the womb. If it be a mole on one side, and the spleen cause it; by the liver veins on the right side and the spleen on the left, as they are more or less filled. Others are of opinion it comes from the solution or connexion of the fibrous neck, and the parts adjacent, and that from the weight of the womb descending. This we deny not; but the ligaments must be loose or broken But women in a dropsy could not be said to have the womb fallen down, if it came only from loosness; but in them it is caused by the saltness of the water, which dries more than it moistens. Now, if there be a little tumor within or without the privities, it is nothing else but a descent of the womb; but if there be a tumor like a goose egg, and a hole at the bottom there is at first a great pain in the parts to which the womb is fastened as the loins, the bottom of the belly, and the os sacrum, which proceeds from the breaking or stretching of the ligaments, but a little after the pain abates; and there is an impediment in walking; and sometimes blood comes from the breach of the vessels, and the excrements and urine are stopt, and then a fever and a convulsion ensueth, which often times proves mortal, especially if it happens to women with child.

For the cure of this distemper, first put it up before the air alter it, or it be swolen or inflamed; and therefore first of all give a clyster to remove the excrements; then lay her on her back with her legs abroad, and thighs lifted up, and head down; then take the tumor in your hand, and thrust it in without violence. If it be swelled by alteration and cold foment it with the decoction of mallows, althæ, line, fenugreek, camomile flowers, bay berries, and anoint it with oil of lillies and hen's grease. If there be an inflamation, do not put it up, but fright it in, by putting red hot iron before it, and making a show as if you intended to burn it; but first sprinkle upon it the powder of mastich, frankincense, and the like: Take frankincense, mastich each two drams; sarcocol steeped in milk, a dram; mummy, pomegranate flower, sanguis draconis, each half a dram; when it is put up, let her

lie with her legs ſtratched, and one upon the other, for 8 or 10 days, and make a peſſary in the form of a pear, with cork or ſpunge and put it into the womb, dipped in ſharp wine or juice of aſcacia, with powder of ſanguis, galbanum bdellium. Alſo apply a cupping glaſs, with great flame under the navel or paps, or to both kidneys, and lay this plaiſter to the back: Take opoponix two ounces, ſtorax liquid half an ounce, maſtich frankincenſe, pitch, bole, each two drams, then with wax make a plaiſter; or laudanum a dram and a half, maſtich, and frankincenſe, each half a dram, wood aloes, cloves, ſpikes, each a dram; aſh colored amber greaſe four grains, muſk half a ſcruple; make two round plaiſters to be laid on each ſide of the navel; make a fume of ſnail ſkins ſalted, or of garlick, and let it be taken in the funnel. Uſe alſo aſtringent fomentations of bramble leaves, plantain, horſetail, myrtle, each two handfuls. wormſeed two pugils, pomegranate flowers half an ounce, boil them in wine and water. For an injection, take comfrey roots an ounce, rupture wort two drams, yarrow, mugwort, each half an ounce, boil them in red wine, and inject it with a ſyringe. To ſtrengthen the womb, take hartſhorn bays, of each a dram, myrrh half a dram: make a powder for two doſes, and give it with ſharp wine. Or, Take zedoary, parſnip ſeed, crabs eyes prepared, each a dram; nutmeg half a dram, and give a dram in powder; but aſtringents muſt be uſed with great caution, leſt by ſtopping the courſes a worſe miſchief follow. To keep it in its place, make rollers and ligatures as for the rupture; and put peſſaries into the bottom of the womb, that may force it to remain. I know ſome phyſicians object againſt this, and ſay they hinder conception; but others in my opinion, much more juſtly affirm, that they neither hinder conception, nor bring any inconvenience; nay, ſo far from that, they help conception, and retain it, and cure the diſeaſe perfectly. Let the diet be ſuch as are of drying aſtringent, and glewing qualities, ſuch as rice, ſtarch, quinces, pears, and green cheeſe: but let ſummer fruits be avoided, and let her wine be aſtringent and red.

CHAP. III.

Of Diſeaſes relating to Women's monthly courſes.

SECTION I. *Of Women's monthly courſes in general.*

DIVINE providence which, with a wiſdom worthy of itſelf, has appointed woman to conceive by coition with the man, and to bear and bring forth children, has provided for the nouriſhment of children during their receſs in the womb of their mother by that redundancy of the blood which is natural to all women, and which flowing out at certain periods of time (when they are not pregnant) are from thence called terms and menſes from their monthly flux of excrementitious and unprofitable blood; which is only to be underſtood with reſpect to the redundancy thereof, being an excrement only with reſpect to its quantity, for as to its quality it is as pure and incorrupt as any blood in the veins; and this appears from the final cauſe of it, which is the propagation and conſervation of mankind; and alſo from the generation of it, it being the ſuperfluity of the laſt aliment of the fleſhy parts. If any aſk, if the menſes be not of a

hurtful quality, how can it have such venomous effects, as if it fall upon trees and herbs, it makes the one barren, and mortifies the other? I answer, This malignity is contracted in the womb; for the woman wanting native heat to digest this superfluity, sends it to the matrix, where seating itself till the mouth of the womb be dilated, it becomes corrupt and mortified, which may easily be, considering the heat and moistness of the place; and so this blood being out of its proper vessels, and too long retained, offends in quality. But if rigidity be the cause why women cannot digest all their last nourishment, and by consequence have those monthly purgations, how comes it to pass, may some say, that they are of so cold a constitution more than men? Of this I have already spoken in the chapter of barrenness; It is chiefly thus: The Author of our being has laid an injunction upon men and women to propagate their kind, hath also so wisely fitted them for that work; and seeing that in the act of coition there must be an agent and a patient (for if they be of one constitution, there can be no propagation) therefore the man is hot and dry, and the woman cold and moist. It is therefore necessary that the woman should be of a cold constitution, because in her is required a redundency of matter for the nourishment of the infant depending on her. And this is wisely ordained by nature, for otherwise the child would detract from, and weaken the principal parts of the mother; which would most unnaturally render the provision of the infant to be the destruction of the parent. Now, these monthly purgations usually begin a bout the 14th year and continue till the 45th or 50th year: yet not so constantly, but that oftentimes there happens a suppression, which is sometimes natural and sometimes morbifical When they are naturally suppress, it is either in breeding women, or such as give suck; but that which is morbifical must be the subject of the following section.

SECTION II.

Of the suppression of the monthly Courses.

THE suppression of the terms which is morbific, is an interception of that accustomary evacuation of blood which should come from the matrix every month, and which proceeds from the matter vitiated. The cause of this suppression is either internal or external; The internal cause is either instrumental, or material, in the blood or in the womb. The blood may be faulty two ways, in quantity, or in quality; in quantity, when it is so consumed that there is no overplus left, as in viragoes, and all virile women, who through their heat and strength of nature digest and consume all their best nourishment; but women of this constitution are rather to be accounted anthropophageæ, that is women eaters, than women breeders because they consume one of the principles of generation which gives a being to the world, *i. e.* the menstruous blood. The blood may also be consumed, and the terms stayed, by too much bleeding at the nose, and likewise by a flux of the hemorrhoides, or by adysenteria, evacuations; chronicle and continued diseases. But secondly, the matter may be vicious in quality, as if it be

ſanguineous, phlegmatical, melancholic: each of theſe if they offend in groſſneſs, will cauſe an obſtruction in the veins.

The womb alſo may be in fault diverſe ways: as by the narrowneſs of the veins and paſſages, by apoſtumous, tumors, ulcers, and by overmuch cold or heat, the one vitiating the action, and the other conſuming the matter; alſo, by an evil compoſition of the uterine parts by the neck of the womb being turned aſide; and ſometimes though but rarely, by a membrane or excreſence of fleſh growing about the womb.

The external cauſe may be heat, or dryneſs of the air, immoderate watching, great labor, violent motion, whereby the matter is ſo conſumed, and the body is ſo exhauſted, that there is no redundant blood remaining to be expelled; whence it is recorded of the Amazons, that being active, and always in motion, they had little or no monthly fluxes: It may alſo be cauſed from cold; and moſt frequently it is ſo making the blood vicious and groſs, condenſing and binding up the paſſages, that it cannot flow forth. The ſigns of the diſeaſe are pains in the head, neck, back, and loins, with wearineſs of the whole body but eſpicially of the hips and legs, by reaſon of a confinity which the womb hath in thoſe parts; if the ſuppreſſion proceeds from cold it cauſeth a heavy ſluggiſh diſpoſition, a pale color, a ſlow pulſe, the urine crude, wateriſh and much in quantity, and no deſire to copulation, the excrements of the guts being uſually retained; but if it proceeds from heat the ſigns are contrary. If it be natural, or cauſed by conception, it may be known by drinking water and honey after ſuppers, going to bed; ſo if after the taking it, it cauſeth the woman to feel a bearing pain about the navel and lower parts of the belly, it is a ſign ſhe hath conceived, and that the ſuppreſſion is natural, if not then it is vicious, and ought medicinally to be taken away, otherwiſe many dangerous diſeaſes will follow; ſuch as ſwoonings, faintings, intermiſſion of pulſe, obſtructions, epilepſies, apoplexies, frenzies, melancholy, paſſions, &c. which makes it highly neceſſary to ſay ſomething now of the cure.

The cure of this diſtemper muſt be by evacuation, for this ſuppreſſion is a phlethoric effect, it will therefore be beſt in the midſt of the humor two days before the wonted evacuation, open the ſaphæna veins of both feet: and if the repletion be no great, apply cupping glaſſes to the legs and thighs, after letting blood, the humor muſt be prepared and made flexible with ſyrup of ſtæchus, horehound, hyſop, betony, maiden hair, of each one handful, make a decoction, and take thereof three ounces of ſyrup of mugwort, ſuccory, maiden hair, mix each half an ounce, and after ſhe comes out of the bath, let her drink it off. Then purge pil. de Agarick, Elephang, Coch; Fædit Galen in this caſe commends Pilula de Hiera cum coloquintida; for as they are proper to purge the humor offending, ſo they open the paſſage of the womb. If the ſtomach be overcharged, let her take a vomit, but let it be ſo prepared as to act both ways leſt the humors ſhould be too much turned back by working only upwards; to which end, take trochiſk of agaria two drams, infuſe them in three ounces of oximel, in which diſſolve benedict, lax-

at, half an ounce; and of the electuary diafarum one fcruple; and let her take it after the manner of a purge. When the humor has been thus purged you may proceed to more proper and forcible remedies. Take extract of mugwort one fcruple and a half, rinds of caffia, parfly feed, caftor, of each a fcruple; and with juice of fmallage, after fupper going to bed. Alfo adminifter to the lower parts fuffumigations of amber, unctions, injections and inceffions; make fuffumigations of amber, galbanum, melanthum, bayberries, mugwort, cinnamon, nutmegs, cloves, &c. Make peffaries of figs, and the leaves of mercury bruifed, and roled up in lint. Make injections of the decoction of mercury; betony, origin, mugwort, and figs, and inject it into the womb by an inftrument fit for that purpofe. For unction, take ladant, oil of myrrh, of each two drams: oil of lillies, almonds, capors, camomile, of each half an ounce, and with wax make an unguent, with which let the place be anointed. Let the air be hot and dry, her fleep fhorter than ordinary, let her ufe moderate exercife before meals, and let her meat and drink be attenuating.

Section III.

Of the Overflowing of the monthly Courfes.

THIS diftemper is directly contrary to that of which I have fpoken, in the foregoing fection, and is no lefs dangerous than the other: and therefore requires to be fpoken of next in order. This diftemper is a fanguineous excrement, proceeding from the womb and exceeding in time and quality. I call it fanguineous, becaufe there are two ways by which the blood flows forth, one is by the internal veins in the body of the womb which is properly called the monthly flux; the other is by thofe veins which are terminated in the neck of the matrix, which fome phyficians call the hemorrhoides of the womb; and that it exceeds, in quantity, when they flow about three days; but this is the moft certain fign of their exceffs in flowing, when they flow fo long that the faculties of the body are thereby weakened; for in bodies abounding with grofs humors, this immoderate flux does fometimes unburden nature of her load, and is not to be ftopt without advice from a phyfician.

The caufe of this immoderate flowing is either external or internal. The external caufe may be the heat of the air; lifting and carrying heavy burdens, unnatural child births, falls, &c. The internal caufe may be threefold, in the matter, inftrument, or faculty: the matter, which is the blood, may be vicious two ways; firft, in quantity being fo much that the veins are not able to contain it; fecondly, in quality, being adufl, fharp, watery, or unconnected. The inftrument, viz. the veins, are faulty by the dilation of the orifice, which may be caufed two ways; firft by the heat of the conftitution, climate, or feafon, heating the blood, whereby the paffes are dilated, and the faculty weakened, that it cannot retain the blood; fecondly, by falls, blows, violent motion, breaking of a vein, &c.

This inordinate flux may be known by the appetite being decayed, the concoction depraved, and all the actions of the body

weakened; the feet ſwelled, the color of the face changed and a general feebleneſs poſſeſſeth the whole body. If it comes by the breaking of a vein, the body is ſometimes cold, the blood flows forth on heaps and that ſuddenly, with great pain; if it comes through heat, the orifice of the veins being dilated, then there is little or no pain, yet the blood flows faſter than it doth in an eroſion, and not ſo faſt as in a rupture. If by eroſion, or ſharpneſs of the blood ſhe feels a great heat ſcalding the paſſage, it differs from the other two in that it flows not ſo ſuddenly, nor ſo copiouſly as they do. If it be weakneſs of the womb, ſhe has an averſion to copulation; if it proceeds from the blood, drop ſome of it on a cloth, and when it is dry, you may judge of the quality by the color; if it be choleric, it will be yellow, if melancholy black, if phlegmatic, wateriſh and whitiſh

The cure of this conſiſts in three particulars. 1ſt, In repelling and carrying back the blood: 2dly, in correcting and taking away the flexibility of the matter: and 3dly, coroborating the vein or faculties. For the firſt, to cauſe a regreſſion of the blood open a vein in her arm, and draw out ſo much blood as the ſtrength of the patient will permit, and that not at once, but at ſeveral times, for thereby the ſpirits are leſs weakened, and the retraction ſo much greater. Apply the cupping glaſſes to the liver that the reverſion may be in the fountain. To correct the fluxibility of the matter, cathartics moderated with aſtringtories may be uſed. If it be cauſed by ſharpneſs of blood, conſider whether the corroſion be by ſalt phlegm, or aduſt choler; if by ſalt phlegm, prepare with ſyrup of violets, wormwood, roſes, citron peels, ſuccory, &c. and then take this purgation: Mirobolans, chervel, half an ounce, trochiſks of agaric one dram, with plantain water make a decoction, add thereto, ſyr. roſar. lux, three ounces, and make a potion. If by aduſt cholar, prepare the body with ſyrup of roſes, myrtles, ſorrel, purſlain, mixed with water of plantain, knotgraſs, and endive, then purge with this potion: Take rinds of mirobolans, rheubarb, of each one dram, cinnamon fifteen grains, infuſe them one night in endive water, add to it the ſtrained pulp of tamarinds, caſſia, of each half an ounce, ſyrup of roſes one ounce, and make a potion. If the blood be wateriſh and unconcocted, as it is in hydropical bodies, and flows forth by reaſon of the tenury, to draw off the water will be profitable, to which end purge with agaric, elaterium, and coloquintida. Sweating is alſo very proper in this caſe, for by it the matter offending is taken away, and the motion of the blood is carried to the outward parts. To procure ſweat, uſe cardanum water with mithridate, or the decoction of guiacum does alſo greatly provoke ſweat; and pills of ſaſaparilla, taken every night at going to bed, are worthily recommended. If the blood flows forth from the opening or breaking of a vein, without any evil quality of itſelf, then ought coroboratives only to be applied, which is the thing to be done in this inordinate flux; bole armonic one ſcruple, London treacle one dram, old conſerve of roſes half an ounce, with ſyrup of myrtles, make an electuary. Or if the flux has continued long, take of maſtich two drams, olibani, tinct. de carebie, of each one dram, balau-

ſtium one ſcruple, make a powder; with ſyrup of quinces make it into pills, and take one always before meals.

SECTION IV. *Of Terms coming out of Order, either before or after the uſual Time.*

BOTH theſe ſhew an ill conſtitution of body. Every thing is beautiful in its order, in nature as well as in morality, and if the order of nature be broke, it ſhews the body to be out of order Of each of theſe effects briefly.

When the monthly courſes come before their time it ſhews a depraved excretion that comes for the time often flowing ſometimes twice a month: The cauſe why they come ſooner is in the blood, which ſtirs up the expulſive faculty in the womb, or ſometimes in the whole body, cauſed oftentimes by the perſon's diet, which increaſes the blood too much, makes it too ſharp or too hot; and if the retentive faculty of the womb be weak, and the expulſive faculty ſtrong, and of a quick ſenſe, it brings them forth the ſooner, and ſometimes they flow ſooner by reaſon of a fall, ſtroke, or ſome violent paſſion, which the parties themſelves can beſt relate. If it be from heat, thin and ſharp humors, it is known by the diſtemper of the whole body. The looſeneſs of the veſſels, and weakneſs of the retentive faculty, is known from a moiſt and looſe habit of body. It is more troubleſome than dangerous but hinders conception, and therefore the cure is neceſſary for all, but eſpecially ſuch as deſire children. If it proceeds from a ſharp blood, let her temper it by a good diet and medicines: for which purpoſe, let her uſe baths of iron water, that correct the diſtemper of the bowels, and, then evacuate. If it proceeds from the retentive faculty, and looſeneſs of the veſſels, it is to be corrected with gentle aſtringents.

As to the courſes flowing after the uſual time, the cauſes are thickneſs of the blood and the ſmallneſs of its quantity, with the ſtraitneſs of the paſſage and weakneſs of the expulſive faculties, either of theſe ſingle, may ſtop the courſes, but if they all concur, they render the diſtemper the worſe. If the blood abounds not in ſuch a quantity as may ſtir up nature to expel it, its purging muſt neceſſarily be deferred till there be enough. And if the blood be thick, the paſſage ſtopped and the expulſive faculty weak, the menſes muſt needs be out of order, and the purging of them retarded.

For the cure of this, if the quantity of blood be ſmall, let her uſe a larger diet and very little exerciſe. If the blood be thick and foul, let it be made thin, and the humors mixed therewith be evacuated. It is good to purge after the courſes have done flowing, and to uſe calamints: and indeed the oftener ſhe purge the better. She may alſo uſe fume and peſſaries, apply cupping glaſſes without ſcarification to the inſides of the thighs, and rub the legs and ſcarify the ancles, and hold the feet in warm water four or five days before the courſes come down. Let her alſo anoint the bottom of her belly with things proper to provoke the terms.

SECTION V. *Of the falſe courſes or Whites.*

THE whites or falſe courſes are a foul excretion from the womb, for from the womb proceeds not only the menſtruous blood, but accidentally many other excrements, which is a diſtillation of a variety of corrupt humors through the womb, flowing from the whole body, or part of the ſame; which, though called the whites, are ſometimes blue or green, or rediſh, not flowing at a ſet time, or every month, but in a diſorderly manner, ſometimes longer, and ſometimes ſhorter. It is different from the running of the reins, both leſs in quantity and whiter and thicker in quality, and coming at a great diſtance: it is different alſo from thoſe night pollutions which are only in ſleep, and do proceed from the imagination of venery.

The cauſe of this diſtemper, is either promiſcuouſly in the whole body, by a cacochymia, or weakneſs of the ſame: or in ſome of the parts, as in the liver, which by the inability of the ſanguificative faculty, cauſeth a generation of corrupt blood, and then the matter is rediſh: ſometimes in the gall being remiſs in its office, not drawing away thoſe choleric ſuperfluities which are engendered in the liver, and then the matter is yellow: ſometimes in the ſpleen, not defecating and cleanſing the blood of the excrementitious parts, and then the matter flowing forth is blackiſh. It may alſo come from catarrhs in the head, or from any other putrefied or corrupt member. But if the matter of the flux be white, the caſe is either in the ſtomach or reins. In the ſtomach by a phlegmatical and crude matter there contracted and vitiated through grief, melancholy, and other diſtempers; for otherwiſe, if the matter were only pituitous, and no ways corrupt or vitiated, being taken into the liver, it might be converted into blood for phlegm in the ventricle is called nouriſhment half digeſted; but being corrupted, although it be ſent into the liver, it cannot correct that which the firſt hath corrupted, and therefore the liver ſends it to the womb, which can neither digeſt it nor repel it, and ſo it is voided out, ſtill keeping the color which it had in the ventricle. The cauſe alſo may be in the veins, being over heated, whereby the ſpermatical matter, by reaſon of its tenuity, flows forth. The external cauſe may be the moiſtneſs of the air, eating corrupt meats, anger, grief, ſlothfulneſs, immoderate ſleeping, and coſtiveneſs

The ſigns are extenuation of body, ſhortneſs and ſtinking breath, loathing of meat, pain in the head, ſwelling of the eyes, melancholy, humidity, flowings from the womb, of divers colors, as rediſh, black, green, yellow, white; it is known from the overflowing of the courſes, in that it keeps no certain period and is of ſo many colors, all which do degenerate from blood

For the cure of this, it muſt be by methods adapted to the caſe; and as the cauſes are various, ſo muſt be the cures.

If it be cauſed by the diſtillation from the brain, take ſyrup of betony, ſtæchas and majoram, purge with pil. loch: make napalia, of the juice of ſage, hyſſop, betony, negella, with one drop of oil cloves, and a little ſilk cotton. Take elect. dianth aromat, roſar, diambre, diamoſci dulcis, of each one dram, nutmegs half a dram at night going to bed.

If the matter flowing forth be rediſh, open a vein in the arm, if not, apply ligatures to the arms and ſhoulders: ſome have cured this diſtemper by rubing the upper parts with crude honey; and ſo Galen ſays he cured the wife of Boetius.

If it proceeds from crudities in the ſtomach, or from a cold diſtempered liver, take every morning of the decoction of lignum ſanctum: purge with pill deagarico, de harmodact, de hiera dyacolocynthid foetida, argragrative. Take of elect, aromat, roſ. two drams, citron peels dried, nutmeg, long pepper, of each one ſcruple, diagalinga one dram, fantah albia, lign aloes, of each half a ſcruple, ſugar, ſix ounces, with mint water make lozenges of it, and then take it after meals.

If with frigidity of the liver be joined a repreſſion of the ſtomach, purging by vomiting is commendable; for which take three drams of the electuary of diaru. Some phyſicians alſo allow of the diuretical means, of opium, petroſolinum, &c.

If the matter of the diſeaſe be melancholious prepare with ſyrup of maiden hair, epithimum, polipody, burrage, bugloſs, fumetory, heart's tongue, and ſyrup by ſantinum, which muſt be made without vinegar, otherwiſe it will rather animate the diſeaſe, than ſtrengthen nature, for melancholy is increaſed by the uſe of vinegar; and by Hippocrates, Silvius, and Aventinus, it is diſallowed of as an enemy to the womb, and therefore not to be uſed in uterine diſeaſes.

Purges of melancholy are, Pilulæ eumartæ, pilulæ Indiæ, pilulæ de lap. Lazuli dioſena, and confectio hamech. Take ſtampt prunes two ounces, ſenna one dram, epithimum, polypody; fumetory; of each a dram and a half, four dates one ounce, with endive water make a decoction; take of it four ounces, add unto it confections hamech three drams. manna three drams, or pilulæ indatum, phil, fætidaruni, agarici trochiſcati, of each one ſcruple, lapiduz lazuli, five grains, with ſyrup of erithimum make pills, and take one every week.

If the matter of the flux be choleric, prepare with ſyrup of endivine, violets, ſuccory roſes and purge with mirabolans, manna, rhubarb, caſſia; take of rhubarb two drams, annis ſeed one dram, cinnamon a ſcruple and a half, infuſe them in ſix ounces of prune broth; add to the ſtraining of manna, an ounce, and take it according to art Take ſpicierum diſtriontaſon, diatragacant. frig. diarrhod. Abbatis diaconit, of each a dram, ſugar four ounces, with plantain water make lozenges.

Laſtly, let the womb be cleanſed from the corrupt matter, and then corroborated and; for the cleanſing thereof, make injections of the decoction of betony, featherfew, mugwort, ſpikenard biſtort, mercury, ſage, adding thereto ſugar, oil of ſweet almonds, of each two ounces: then to corroborate the womb, prepare trochiſks in this manner: Take of myrrh, featherfew, mugwort, nutmegs, mace, amber, lign, aloes, ſtorax, red roſes, of each an ounce, with mucilage of tragacanth make trochiſks, caſt them on the coals and ſmother the womb therewith: Fomentations may be alſo made for the womb of red wine, in which has been decocted maſtich, fine bole, baluſtia, red roſes. Drying diet is beſt, becauſe this diſtemper uſually abounds with

phlegmatic and crude humors. Immoderate ſleep is hurtful, but moderate exerciſe will do well.

Thus I have gone through the principal diſeaſes peculiar to the female ſex, and preſcribed from each of them ſuch remedies, as with the divine bleſſing, will cure their diſtempers, confirm their health, and remove all thoſe obſtructions, which might otherwiſe prevent their bearing children: and I have brought it into ſo narrow a compaſs, that it might be of the more general uſe, being willing to put it into every one's power, that has occaſion for it, to purchaſe this rich treaſure at an eaſy rate.

THE END.

ARISTOTLE's

BOOK OF

PROBLEMS,

WITH OTHER

ASTRONOMERS, ASTROLOGERS, | PHILOSOPHERS, PHYSICIANS, &c.

WHEREIN ARE CONTAINED DIVERS QUESTIONS AND ANSWERS, TOUCHING THE STATE OF MAN'S BODY TOGETHER WITH THE REASON OF DIVERS WONDERS IN THE CREATION: THE GENERATION OF BIRDS, BEASTS, FISHES, AND INSECTS; AND MANY OTHER PROBLEMS ON THE MOST WEIGHTY MATTERS, BY WAY OF QUESTION AND ANSWER.

TO THE READER.

READER,

THESE Problems having been printed very often, and finding so general an acceptance, divers books have been hoisted into the world under the name of Aristotle, *so that many people have bought them, thinking they had the right sort, by which the public has been injured as well as the proprietors.*

The matter it contains is necessary for all people to know, and. as man is said to be a microcosm, or little world, and in him the Almighty *hath imprinted his own image so lively, that no power whatsoever is able to blot it out; so his image and similitude is the soul and understanding. And notwithstanding all the perfections which man hath in himself, few or none take delight in the study of himself, or is careful to know the substance, state, condition, quality, or use of the several parts of his own body, although he be the honor of nature, and more to be admired than the strongest and rarest wonder that ever happened. I have therefore published this little book written by* Aristotle, *and the deepest philosophers, who teach the use of all parts of the body, their nature, quality, property and substance, and question not but it will afford both innocent, necessary and useful knowledge, and prove profitable to both sexes.*

ARISTOTLE's PROBLEMS.

AMONG all living creatures, why hath man only, his countenance lifted up towards heaven.

Unto this queſtion there are divers anſwers.

1ſt, It proceeds from the will of the Creator. And although the anſwer be true, yet it ſeemeth not to be of force, becauſe that ſo all queſtions might be eaſily reſolved.

2dly, I anſwer, that for the moſt part, every workman doth make his firſt work worſe, and then his ſecond better, ſo God created all beaſts before man, gave them their face looking down on the earth, and then he created man as it doth appear in Geneſis, unto whom he gave an upright ſhape, lifted into heaven, becauſe it is drawn from divinity, but this derogates from the goodneſs of God, who maketh all his works perfect and good

3dly, It is anſwered, that man only, among all living creatures, is ordained to the kingdom of heaven, and therefore hath his face elevated and lifted up to heaven, becauſe that deſpiſing worldly and earthly things he ought to contemplate on heavenly things.

4thly, That the reaſonable ſoul is like unto angels, and finally ordained to enjoy God, as appears by Averro's *de anima*, and therefore he hath a figure looking upwards.

5thly, That man is a microcoſm, that is a little world, as Ariſtotle ſaith, and therefore he doth command all other living creatures and they obey him.

6thly, It anſwered that, naturally there is given unto every thing, and every work, that form and figure which is fit and proper for its motion: as, unto the heaven roundneſs, to the fire a pyramidical form, that is, broad beneath, and ſharp towards the top, which form is moſt apt to aſcend: and ſo man has his face up to heaven, to behold the wonders of God's works.

Why is the head of beaſts hairy?

The answer, according to the opinion of Conſt. is, that the hairs are the ornament of the head and of the brain, and the brain is purged and evacuated of groſs humors by the growing of the hair, from the higheſt unto the loweſt parts, which paſs through the pores of the exterior fleſh and do become dry, and are converted into hairs. This appears to be true, becauſe that in all the body of man there is nothing drier than the hairs; for they are drier than the bones, as Albetus Magnus doth affirm, becauſe that ſome beaſts are nouriſhed with bones, but no beaſt can digeſt feathers or hair, but do void them undigeſted; they being too hot for nutriment.

2dly, It is anſwered, that the brain is purged four manner of ways; of ſuperfluous watery humors by the eyes, from melancholy by the ears, of choler by the noſe, and of phlegm by the hair, and that is the intent of the phyſician.

Why have men longer hair on their heads than other living creatures?

Ariſt. *de generat. anim* ſays men have the moiſteſt brain of all living creatures, from which the ſeed proceedeth, which is converted into the long hair of the head.

2dly, It is anſwered that the humors of man are fat, and do not become eaſily dry, and therefore the hair groweth longer in man than in beaſts, whoſe humors eaſily dry.

Why doth the hair take deeper root in man's skin than in any other living creature?

Becauſe they have greater ſtore of nouriſhment in man, and therefore grow more into the inward parts of man—And this is alſo the reaſon why in other creatures the hair doth alter and change with the ſkin, and not in man, unleſs it be ſometimes a ſcar or wound.

Why have women longer hair than men?

1ſt, Becauſe women are moiſter than men and phlegmatic, and therefore there is more matter of hair in them: and furthermore, this matter is more increaſed in women than in men from their interior parts, and eſpecially in the time of their monthly terms, becauſe the matter doth not aſcend, whereby the humor which breedeth the hair doth increaſe. And Albertus ſays, that if the hair of a woman in the time of their flowers be put into dung, a venomous ſerpent is engendered of it

2dly, Becauſe women want beards, and ſo the matter of the beard doth go into the matter of the hair.

Why have ſome men ſoft hair, and ſome hard?

We anſwer, with Ariſtotle, that the hair hath proportion with the ſkin, of which ſome is hard, ſome thick and groſs, ſome ſubtil and ſoft; therefore the hair which groweth out of a thick and groſs ſkin, is thick and groſs and that which groweth out of a ſubtil and ſoft ſkin, is fine and ſoft. When the pores are open, much humor cometh forth, which engenders hard hair; but when the pores are ſtraight, then there groweth ſoft and fine hair Ariſtotle ſhews that women have ſofter hair than men, becauſe their pores are more ſhut and ſtrait, by reaſon of their coldneſs.

2dly, Becauſe that, for the moſt part, choleric men, have harder and thicker hair than others, by reaſon of their heat, and their pores being forever open, and therefore they have beards ſooner than others. Ariſtotle giveth example of the bear and boar, which have hard hair, proceeding of heat and choler, which makes them bold; and contrawiſe, thoſe beaſts that have ſoft hair, as the hart and hare, are fearful, becauſe they be cold. Another reaſon of the ſoftneſs and hardneſs of the hair, is drawn from the climate where a man is born; becauſe that in hot regions hard and groſs hair is engendered, as in the Ethiopians; and the contrary is true in cold countries.

Why have ſome men curled hair and ſome ſmooth?

The anſwer is, that the cauſe of the curling of the hair is great abundance of heat in a man, then the hair doth curl and grow upward. A ſign of this is, that ſometimes a man doth enter into a bath ſmooth haired and afterwards becometh curled; and therefore the keepers of baths have often curled hair as alſo the Ethiopians and choleric men: but the cauſe of the ſmoothneſs is the abundance of moiſt humors which tend downwards; and a proof of this, they have much humidity in them and ſmall heat.

Why do women ſhew their ripeneſs by their hair in their priuy parts and not elſewhere, but men in their breaſts?

We anſwer, becauſe there is abundance of humidity in that place, but more in women than in men. Men have the mouth of the bladder in that place where the urine is contained, of which the hair in the breaſts, and about the navel, is engendered; but in women the humidity of the bladder, and of the womb, is joined and meeteth in that low ſecret place, and is diſſolved and ſeparated in that place through much vapor and fumes, which are the cauſe of hair. And the like doth happen in other places, where hair is, as under the arms.

Why have not women beards?

Becauſe they want heat as appeareth in ſome effeminate men, who are beardleſs for the ſame cauſe, becauſe they are of the complexion of a woman.

Why doth the hair grow in them that are hanged?

Becauſe their bodies are expoſed to the ſun, which through its heat diſſolves all the moiſture into a fume or vapor, of which the hair doth grow.

Why is the hair of the beard thicker and groſſer, than elſewhere, and the more men are ſhaven, the harder and thicker it groweth?

Becauſe according to the rule of the phyſician, by how much more the humor or vapor of any liquor is diſſolved and taken away, by ſo much more the humor remaining doth draw the ſame: and therefore by how much the more the hair is ſhaven ſo much the humors gather, thicken, and of them hair is engendered and doth there alſo wax hard.

Why are women more ſmooth and ſoft than men?

The anſwer, according to Ariſtotle, is, that in women all humidity and ſuperfluity, is expelled with their monthly terms; which ſuperfluity remaineth in men, and thro' vapors do paſs into the hair. And a ſign of this is, that in women who have running at the noſe, impoſthume, or ulcer, no ſuch matter is expelled. And ſome women begin to have beards in their old age, after forty or fifty years of age, when their flowers are ceaſed.

Why doth man only, above all other creatures, wax hoary and grey as Pythagoras and Ariſtotle affirm?

The anſwer according unto the philoſophers, is, becauſe man hath the hoteſt heart of all living creatures; and therefore nature, leſt a man ſhould be ſuffocated through the heat of his heart, hath placed the heart, which is moſt hot, under the brain, which is moſt cold; to the end that the heat of the heart may be tempered with the coldneſs of the brain and the coldneſs of the brain may be heated with the heat of the heart, and thereby there might be a temperature in both. A ſign to prove this is, becauſe of all living creatures man hath the worſt breath, if he comes to his full age. Furthermore, man doth conſume half his time in ſleeping, which doth proceed from the great acceſs of the coldneſs and moiſture of the brain, and by that means doth want natural heat to digeſt and conſume that moiſtneſs; which heat he hath ſufficiently in his youth, and therefore in that age is not grey, but in his old age, when heat faileth; and therefore the vapors aſcending from the ſtomach remain undi-

geſted and unconſumed for want of natural heat and then putrefies, of which putrefaction of humors the whiteneſs doth follow which is called greyneſs or hoarineſs. Whereby it doth appear, that hoarineſs is nothing elſe but a whiteneſs of the hair, cauſed by putrefaction of humors about the roots of the hair, through the natural want of heat in old age. Sometimes alſo greyneſs is cauſed by the naughtineſs of complexion which may well happen in youth, and ſometimes by reaſon of the moiſture undigeſted and ſometimes through overgreat fear and care, as appeareth in merchants, ſailors, thieves: from whence cometh this vice.

Cura facit canos, quamvis homo non habet annos.

Why doth red hair grow white ſooner than other?

According to the opinion of Ariſtotle, becauſe redneſs is an infirmity of the hair, for it is engendered of a weak and infirm matter, that is to ſay, of matter corrupted with the flowers of the woman, and therefore they wax white ſooner than black hair.

Why do wolves grow griſly?

The better to underſtand this queſtion note the difference between greyneſs and griſling: Becauſe that greyneſs is cauſed through the defect of natural heat, but griſlineſs through devouring and eating, as Ariſtotle witneſſeth, lib. 7. *de animal.* The wolf being a devouring beaſt, and an eater, he letteth it down gluttenouſly without chewing, and that at once enough for three days, by which means groſs vapors are engendered in the wolf's body, and by conſequence griſlineſs. Secondly, greyneſs and griſlineſs do differ, becauſe greyneſs is only on the head, and griſlineſs over all the body.

Why do horſes grow griſly and grey?

According to Ariſtotle, becauſe they are for the moſt part in the ſun: and in his opinion alſo, heat doth accidentally cauſe putrefaction: and therefore that kind of heat doth putrefy the matter of hair, and by conſequence they are quickly pilled.

Why do men become bald, and trees fall their leaves in the winter?

Ariſtotle doth give the ſame reaſon for both; becauſe that the want of moiſture in both is the cauſe of the want of the hair and of the leaves: and this is proved becauſe that a man becometh bald through venery, for that is letting forth of natural humidity and heat. And ſo by that exceſs in carnal pleaſure, moiſture is conſumed, which is the nutriment of the hair, and therefore baldneſs doth enſue. And this is evidently proved in eunuchs and women who do not grow bald, becauſe they do not depart from their moiſtneſs; and therefore eunuchs are of the complexion of women. But if you aſk why eunuchs are not bald, nor have the gout, as Hypocrates ſaith, the anſwer is, according to Galen, becauſe the cauſe of baldneſs is dryneſs the which is not in eunuchs, becauſe they want their ſtones, the which do miniſter heat into all the parts of the body, and the heat doth open the pores, which being open, the hair doth fall.

Why are not women bald.

Becauſe they are cold and moiſt, which are the cauſes that the hair remaineth; for moiſtneſs doth give nutriment to the hair and coldneſs doth bind the pores.

Why are bald men deceitful, according to the verſe?

Si non vis falli, fugies confortia calvi.

Becauſe baldneſs doth witneſs a choleric complexion which is hot and dry: and choleric men are naturally deceitful according to the verſe.

Herſuious fallax, iraſcens prodigus, audax.

And therefore it followeth, *a primum ad ultimmum*, that bald men are deceitful and crafty.

Why are not blind men naturally bald?

Becauſe that according to Ariſtotle, the eye hath moſt moiſture in it, and that moiſture which ſhould paſs through by the ſubſtance of the eyes, doth become a ſufficient nutriment of the hair, and therefore they are ſeldom bald.

Why doth hair ſtand on end when men are afraid?

Becauſe in time of fear the heat doth go from the outward part of the body into the inward, to the intent to help the heart, and ſo the pores in which the hairs are faſtened, are ſhut up; after which ſtopping and ſhutting up of the pores, the ſtanding up of the hair doth follow, as it is ſeen in beaſts, as dogs, wild boars, and peacocks.

Of the HEAD.

Why is man's head round?

Becauſe it is moſt fit to receive any thing into it, as Ariſtotle doth affirm, *Lib. de cæs* and the head doth contain in it five ſenſes. This is alſo ſeen in a material ſphere.

Why is the head round?

Ariſtotle ſaith, becauſe it doth contain in it the moiſteſt part of the living creatures, and alſo becauſe the brain may be defended thereby as with a ſhield.

Why is the head abſolutely long but ſomewhat round?

To the end the three creeks and cells of the brain might the better be diſtinguiſhed; that is the fancy in the forehead, the diſcourſing or reaſonable part in the middle, and memory in the hindermoſt part.

Why doth a man lift up his head towards the heavens when he doth imagine?

Becauſe the imagination is in the fore part of the head or brain and therefore it lifteth up itſelf, that the creeks or cells of the imagination may be opened, and that the ſpirits which help the imagination, are fit for that purpoſe, having their concourſe thither, may help the imagination.

Why doth a man when he muſeth, or thinketh on things paſt, look down towards the earth?

Becauſe the cell or creek which is behind, is the creek or chamber of memory, and therefore that looketh towards heaven when the head is bowed down; and ſo that cell is open, to the end that the ſpirits which perfect the memory ſhould enter in.

Why is not the head fleſhy like unto the other parts of the body?

Becauſe that, according to Ariſtotle, the head would be too

heavy and would not ſtand ſtedfaſtly ; and therefore it is without fleſh. Alſo a head loaded with fleſh doth betoken an evil complexion.

Why is the head ſubject to aches and griefs ?

According to Conſtant, by reaſon of evil humors which proceed from the ſtomach, aſcend up to the head and diſturb the brain, and ſo cauſe the pain in the head. And ſometimes it proceeds from overmuch filling the ſtomach, becauſe, according to the opinion of Galen, two great ſinews paſs from the brain to the mouth of the ſtomach, and therefore theſe two parts do ſuffer grief always together. Sometimes the ache doth proceed of drinking ſtrong wine, of fuming meats, as garlic or onions, and ſometimes of phlegm in the ſtomach, whereof ſpring quotidian fevers.

Why have women the headache more than men ?

Albertus ſaith it is by reaſon of their monthly terms, which men are not troubled with, and ſo a moiſt, unclean and venomous fume is diſſolved, the which ſeeking paſſage upward doth cauſe the headache.

Why is the brain white ?

There are two anſwers ; the firſt becauſe it is cold, and coldneſs is the mother of white ; the philoſophers do teach the ſecond, becauſe it may receive the ſimilitude and likeneſs of all colors, which the white color can beſt do, becauſe it is moſt ſimple.

Why are all the ſenſes in the head ?

Becauſe, as Albertus ſaith, the brain is there on which all the ſenſes do depend, and are directed by it and by conſequence it maketh all the ſpirits to feel, and by it all the membranes are governed.

Why cannot a man eſcape death if the brain or heart be hurt ?

Becauſe the heart and brain are two of the moſt principal parts which concern life : and therefore if they be hurt there is no remedy left for the cure.

Why is the brain moiſt ?

Becauſe it may eaſily receive an impreſſion, which moiſture can beſt do, as it appeareth in wax, which doth eaſily receive the print of the ſeal when it is ſoft.

Why is the brain cold ?

This is anſwered two ways ; firſt, becauſe that by this coldneſs it may clear the underſtanding of a man, and make it ſubtil. Secondly, that by the coldneſs of the brain the heat of the heart may be tempered.

Of the Eyes.

Why have you but one noſe and two eyes ?

Becauſe our light is more neceſſary for us than the ſmelling. And therefore it doth proceed from the goodneſs of nature that if we receive any hurt or loſs of one eye, that yet there ſhould one remain ; unto which the ſpirit with which we ſee, called Spiritus Viſus, is directed when the other is out

Why have children in their youth great eyes, and why do they become ſmaller and leſſer in their age ?

According to Ariſtotle *de generat.* It proceedeth from the want of fire and from the aſſembling and meeting together of

light and humor: the eyes are lightened by reaſon of the ſun, which doth lighten the eaſy humor of the eye, and purge it, and in the abſence of the ſun thoſe humors become dark and black, and therefore the ſight is not ſo good.

Why doth the bluiſh grey eye ſee badly in the day time and well in the night.

Becauſe, ſaith Ariſtotle, greyneſs is light and ſhining of itſelf, and the ſpirits with which we ſee are weakened in the day time, and ſtrengthen in the night.

Why be men's eyes of divers colors?

This proceedeth, ſaith Ariſtotle, by reaſon of the diverſity of the humors; the eye therefore hath four coverings and three humors: the firſt covering is called conſolidative, which is the outermoſt, and ſtrong and fat. The ſecond is a horny ſkin and covering to the likeneſs of an horn, and that is a clear covering. The third is called Uvea, of the likeneſs of a black grape. The fourth is called a cobweb. But according to the opinion of ſome the eye doth conſiſt of ſeven coverings or ſkins, and three humors. The firſt humor is called abungines for the likeneſs unto the white of an egg. The ſecond glacial, that is clear like unto ice or chriſtaline. The third vitreous, that is, clear as glaſs. And the diverſity of humor cauſeth the diverſity of the eyes.

Why are men who have but one eye good archers? and why do good archers commonly ſhut one eye? and why do ſuch as behold the ſtars look through a trunk with one eye?

This matter is handled in the perſpective arts and the reaſon is as it doth appear in the book of Cauſes, becauſe that every virtue and ſtrength united knit together, is ſtronger than itſelf diſperſed and ſcattered. Therefore all the force of ſeeing diperſed in two eyes, the one being ſhut, is gathered into the other, and ſo the light is fortified in him, and by conſequence he doth ſee better and more certainly with one eye being ſhut than both open.

Why do ſuch as drink much, and laugh much ſhed much tears.

Becauſe that whilſt they drink and laugh without meaſure, the air which is drawn in, doth not paſs out through the windpipe, and ſo with force is directed and ſent to the eyes, and by their pores paſſing out doth expel the humors of the eyes, the which humors being ſo expulſed do bring tears.

Why do ſuch as weep much, urine but little?

Becauſe ſaith Ariſtotle, the radical humidity of a tear and of urine are one and the ſame nature; and therefore, where weeping doth increaſe, urine doth diminiſh; and that they be of one nature, is plain to the taſte, becauſe they are both ſalt.

Why do ſome that have clear eyes ſee nothing at all?

By reaſon of the copulation and naughtineſs of the ſinews with which we ſee; for the temples being deſtroyed, the ſtrength of the light cannot be carried from the brain to the eye, as philoſophers teach, *lib de ſen. & ſentio.*

Why is the eye clear and ſmooth like unto a glaſs?

Becauſe the things which may be ſeen are better beaten back from a ſmooth thing than otherwiſe.

Secondly, I anſwer, it is becauſe the eye is very moiſt above

all parts of the body and of a waterish nature; and as the water is clear and smooth, so likewise is the eye.

Why do men who have their eyes deep in their head see well afar off and the like in beasts?

Because, saith Aristotle, (2d. *de. Gener. Animal.*) the force and power by which we see is dispersed in them, and doth go directly to the thing which is seen. And this is proved by a similitude, because that when a man doth stand in a deep ditch or well, he doth see in the day time, standing in those places, the stars of the firmament; as Aristotle doth teach in his treatise, *De Forma Specula*; because that then the power of the sight and of the beams are not scattered.

Wherefore do those men who have their eyes far out, and not deep in their head, see but meanly and not far distant?

Because, saith Aristotle, the beams of the sight which pass from the eye are scattered on every side, and go directly unto the thing that is seen, and therefore the sight is weakened.

Why are many beasts born blind as lions' whelps, and dogs' whelps?

Because such beasts are not yet of perfect ripeness and maturity, and the cause of nutriment doth not work in them. And this is proved by a similitude of the swallow, those eyes, if they were taken out when they are little ones in the nest, would grow again; and this is plain in many other beasts, which are brought forth before their time, as it were dead, as bears' whelps. And this reason doth belong rather to the perspective than the natural philosopher.

Why do the eyes of a woman that hath her flowers stain a new glass, as Aristotle saith, de somno et Vergil, *and this is the problem why doth a basilisk kill a man with his eyes?*

To the first, I answer that when the flowers do run from a woman, then a most venomous air is dissolved in them, which doth ascend unto the woman's head; and she having grief of her head, doth cover it with many veils and kerchiefs; and because the eyes are full of small insensible holes, which are called pores, there the air seeketh a passage, and so doth infect the eyes, which are full of blood, and their eyes do appear also drooping and full of tears, by reason of the evil vapors, that are in them, and those vapors are incorporated, and multiplied, until they come into the glass before them, and by reason that such a glass is found, clear and smooth it doth easily receive that which is unclean.

To the second it is answered, that the basilisk is a very venomous and infected beast and that there pass from his eyes venomous vapors which are multiplied upon the thing which is seen by him, and even unto the eye of man; the which venomous vapors or humors entering into the body do infect him, and so in the end the man dieth. And this is also the reason why the basilisk looking upon a shield perfectly well made with fast clammy pitch, or any hard smooth thing, doth kill himself, because the humors are beaten back from the smooth hard thing, unto the basilisk, by which beating back he is killed. And the like is said of a woman when she hath her monthly disease, whereof

it followeth that ſome old women do hurt themſelves when they look upon glaſſes, or other firm and ſolid things, in the time of their terms.

Why are not ſparkling cats' eyes and wolves eyes ſeen in the light and not in the dark?

Becauſe that the greater light doth darken the leſſer and therefore in a greater light the ſparkling cannot be ſeen, but the greater the darkneſs, the eaſier it is ſeen, and is made more ſtrong and ſhining, becauſe it is not then hindered by a greater external light, which might darken it.

Why doth a man beholding himſelf in a glaſs preſently forget his own diſpoſition?

Anſwer is made in Lib. de forma ſpeculi, that the image ſeen by the glaſs doth repreſent it weakly and indirectly, to the power of the ſight; and becauſe it is repreſented weakly it is alſo weakly apprehended, and by conſequence is no longer retained.

Why is the ſight recreated and refreſhed by a green color as this verſe ſheweth?

Fens, ſpeculum gramen oculis ſunt aleviamen.

Becauſe the green color doth meanly move the inſtrument of ſight, and therefore doth comfort the ſight; but this doth not black nor white colors, becauſe the colors do vehemently ſtir and alter the organ and inſtrument of the light, and therefore make the greater violence, but by how much more violent the thing is which is felt or ſeen, the more it doth deſtroy and weaken the ſenſe, as Ariſtotle doth teach. *Lib. 2. de animal.*

Of the Nose.

Why doth the noſe ſtand out further than other parts of the body?

There are two anſwers; the firſt, becauſe the noſe is as it were the ſink of the brain, by which the phlegm of the brain is purged, and therefore it doth ſtand forth, leſt the other parts ſhould be defiled: the ſecond (according to Conſtant.) is becauſe the noſe is the beauty of the face, and therefore, it doth ſhew itſelf and ſhine. It doth ſmell alſo and adorn the face, as Boetus ſaith, *de deſcip ſchol.*

Why hath man the worſt ſmell of all living creatures, as it doth appear, Lib. de Animal.

Becauſe the man (as the commentator ſaith) in reſpect to this quality hath the moſt brain of all creatures: and therefore by that exceeding coldneſs and moiſtneſs the brain wanteth a good diſpoſition, and by conſequence the ſmelling inſtrument is not good, as Ariſtotle and Themiſtocles do teach: yea, ſome men there be who do not ſmell at all.

Why doth the vulture or cormorant ſmell very well, as the commentator doth ſay?

Becauſe they have a very dry brain, and therefore the air carrying the ſmell, is not hindered by the humidity of the brain, but doth preſently touch its inſtrument; and therefore he ſaith, that the vultures, tygers, and other beaſts, came five hundred miles to the dead bodies after a battle in Greece.

Why did nature make noſtrils?

For three commodities. Firſt, becauſe that the mouth being ſhut, we draw breath in by the noſtrils to refreſh the heart with.

The ſecond cammodity is, becauſe that the air which proceedeth from the mouth doth ſavor badly, becauſe if the vapors which riſe from the ſtomach, but that which we breathe from the noſe is not noiſome. The third is, becauſe the phlegm which doth proceed from the brain is purged by them.

Why do men ſneeze?

Becauſe that the expulſive virtue of power and the ſight ſhould thereby be purged, and the brain alſo from ſuperfluities, becauſe that as the lungs are purged by coughing ſo is the ſight and brain by ſneezing: and thoſe who ſneeze often are ſaid to have a ſtrong brain; and therefore the phyſicians give ſneezing medicaments to purge the brain, and ſuch ſick perſons as cannot ſneeze die quickly, becauſe it is a ſign their brain is wholly ſtuffed with evil humors, which cannot be purged.

Why do ſuch as are apoplectic not ſneeze; that is, ſuch as are ſubject to bleed?

Becauſe the paſſages or venetricles of the brain are ſtopped in them; and if they could ſneeze, their apoplexy would be looſed

Why doth the heat of the ſun provoke ſneezing and not the heat of fire?

Becauſe the heat of the ſun doth diſſolve and not conſume; and therefore the vapor diſſolved is expelled by ſneezing; but the heat of the fire doth diſſolve and conſume, and therefore rather doth hinder ſneezing than provoke.

Of the EARS.

Why do beaſts move their ears and not men?

Becauſe there is a certain muſcle near unto the jaw which doth cauſe motion in the ear; and therefore that muſcle being extended and ſtretched, men do not move their ears, as it hath been ſeen in divers men, but all beaſts do uſe that muſcle or fleſhy ſinew, and therefore do move their ears.

Why is rain prognoſticated by the pricking up of aſſes' ears?

Becauſe the aſs is a very melancholy beaſt, and it proceedeth from melancholy that he doth foreſee rain to come. In the time of rain, all beaſts prick up their ears, and therefore the aſs perceiving that it will rain, doth prick up his ears before it come.

Why have ſome beaſts no ears?

Ariſtotle doth anſwer and ſay, that nature doth give unto every thing that which is fit for it; but if ſhe ſhould have given birds ears, their flying would have been hindered by them: likewiſe fiſh do not want ears, becauſe they would hinder their ſwimming, and have only certain little holes through which they hear, as Ariſtotle declares by the ſea calf.

Why have dates ears, ſeeing they ſeem to be birds?

Becauſe they are partly birds in nature, in that they do fly, by reaſon whereof they have wings; and partly they are hairy, becauſe they are mice, therefore nature has, being wiſe, given them ears.

Why have men only round ears?

Becauſe the ſhape of the whole and of the parts ſhould be proportionable, and eſpecially in all things of one nature: for, as a drop of water is round, ſo the whole water, John de ſacro Boſco

doth prove; and so because a man's head is round, the ears incline towards the same figure: but the heads of beasts, are somewhat long, and so the ears are drawn into length also.

Why did nature give living creatures ears?

For two causes: 1. Because with them they should hear. 2. Because that by the ear choleric superfluity is purged; for, as the head is purged of phlegmatic superfluity by the nose, so from choleric by the ears.

Of the MOUTH.

Why hath the mouth lips to compass it?

According to Const. because the lips do cover and defend the teeth it were unseemly that the teeth should always be seen. Another answer is, that the teeth are of a cold nature, and would therefore be soon hurt, if they were not covered with lips. Another moral reason is, because a man should not be too hasty of speech.

Why hath a man two eyes, two ears, and but one mouth?

Because a man should speak but little, and hear and see much. And withal, Aristotle doth say that the hearing and the sight doth shew us the difference of many things; and Seneca doth agree unto this, affirming that nature environed the tongue with a double cloister, and teeth, and lips, and has made the ears open and wide, and has given us but one mouth to speak but little, though we hear much.

Why hath a man a mouth?

For many commodities: 1. Because the mouth is the gate and door of the stomach. 2. Because the meat is chewed in the mouth, and prepared and made ready for the first digestion, although Avicen doth hold that digestion is made in the mouth. 3. Because that the air drawn into the hollow of the mouth for the refreshing of the heart is made more pure and subtil. And for many other causes which hereafter shall appear.

Why are the lips moveable?

Because of forming the voice and words, which cannot be perfectly done without them. For as without *a*, *b*, *c*, there is no writing, so without the lips no voice can be well formed.

Why do men gape?

The gloss upon the last part of Hippocrates' Aphorisms saith, that it proceeds of weariesomeness, as when a man sitting among such as he doth not know, whose company he would willingly be rid of. Besides, gaping is caused of the thick fume and vapors which fill the jaws, by the expulsion of which is caused the stretching out and expulsion of the jaws, and opening of the mouth, which is called gaping.

Why doth a man gape when he seeth another gape?

This proceedeth of imagination. And this is proved by a similitude, for an ass is an animal void of sense, by reason of his melancholy, because he doth retain his superfluity a long time, and would neither eat nor piss, unless he should hear another piss; and so a man gapes thro' imagination when another man doth gape.

Of the TEETH.

Why have they only, among all other bones, the sense of feeling?

Becauſe, as Avicen and Galen ſay, they diſcern heat and cold which hurt them, which other bones need not.

Why have men more teeth than women?

By reaſon of the abundance of heat and blood, which is more in men than in women.

Why doth the teeth grow to the end of our life, and not the other bones?

Becauſe otherwiſe they would be conſumed with chewing and grinding.

Why do the teeth only come again when they fall, or be taken out, and other bones taken away grow no more?

Becauſe that, according to Ariſtotle, all other bones are engendered of the humidity which is called radical, and ſo they breed in the womb of the mother, but the teeth are engendered of nutritive humidity, which is renewed and increaſed from day to day.

Why are the fore teeth ſharp and the cheek teeth broad.

This proceedeth of the defect of matter, and of the figure, becauſe the fore teeth are ſharp, and the others broad. But, according to Ariſtotle, there is another anſwer; that is, that it is the office of the fore teeth to cut the meat, and therefore they are ſharp; and the office of the other to chew the meat, and therefore they are broad in faſhion, which is fit for that purpoſe.

Why do the fore teeth grow ſooneſt?

Becauſe we want them ſooner in cutting than the other in chewing.

Why do teeth of human creatures grow black in old age?

This proceedeth of the corruption of meat, and the corruption of phlegm, and a naughty choleric humor.

Why are colt's teeth yellow, and of the color of ſaffron when they are young and grow white when they are old?

Ariſtotle ſaith, that a horſe hath abundance of watery humors in him, which in his youth are digeſted and converted into groſſneſs; but in old age heat is diminiſhed, and the watery humors remain, whoſe proper color is white.

Why did nature give living creatures teeth?

Ariſtotle ſaith (*Lib. degenerat. Animal*) to ſome to fight with, for the defence of their lives, as unto wolves and bears; unto ſome to eat with, as unto horſes; unto ſome for the forming of their voice, as unto men, as it appeareth by the commentary in the book *de Animal.*

Why do horned beaſts want their upper cheek teeth?

According to Ariſtotle, in his book *de Animal.* horns and teeth are cauſed of the ſelf ſame matter, that is of nutrimental humidity, and therefore the matter which paſſeth into horns turned not into teeth, conſequently they want the upper teeth. And ſuch beaſts according to Ariſtotle, cannot chew well; whereupon for want of teeth, they have two ſtomachs by conſequence, and ſo to chew their meat twice: and they do firſt convey their meat into the ſtomach or belly, and then return it from whence it came, and chew it.

Why are ſome creatures brought forth with teeth, as kids and lambs, and ſome without them, as men?

Nature doth not want in things neceſſary, nor abound in things

ſuperfluous; and therefore becauſe theſe beaſts not long after they be fallen, do need teeth: but men are nouriſhed with their mother's dugs for a time, and therefore, for a time, do not need teeth.

W*hy have not birds teeth*?

Becauſe the matter of teeth paſſeth into their beak, and therefore there is their digeſtion: or elſe it is anſwered, that although they do not chew with teeth, yet their head in digeſtion doth ſupply the want of teeth.

Of the TONGUE.

W*hy is the tongue full of pores*?

According to Ariſtotle *de Animal.* Becauſe the tongue is the means whereby we taſte; and through the mouth in the pores of the tongue the taſte doth come into the ſenſe of taſting. Otherwiſe, it is anſwered, that frothy ſpittle is ſent into the mouth by the tongue from the lungs, moiſten the meat, and making it ready for the firſt digeſtion; and therefore the tongue is full of pores, becauſe many have paſſage through it.

W*hy doth the tongue of ſuch as are ſick of agues judge all things bitter*?

Becauſe the ſtomach of ſuch perſons is filled with choleric humors, and choler is very bitter, as it appeareth by the gall, and therefore this bitter fume doth infect their tongue, and ſo the tongue being full of theſe taſtes, doth judge them bitter, although the fault be not in the meat.

Why doth the tongue water when we hear ſour and ſharp things named?

Becauſe the imaginative virtue or power is of greater force than the power and faculty of taſting: and when we imagine a taſte, we conceive it by the power of taſting as by a mean, becauſe there is nothing felt by the taſte; but by means of that ſpittle the tongue doth water.

Why do ſome ſtammer and liſp?

This happeneth from many cauſes, ſometimes through the moiſtneſs of the tongue and brain, as in children, which cannot ſpeak plainly, nor pronounce many letters. Sometimes it happeneth by reaſon of the ſhrinking of certain ſinews, which are corrupted with phlegm; for ſuch ſinews there be which go to the tongue.

Why are the tongues of ſerpents and mad dogs venomous?

Becauſe of the malignity and tumoſity of the venomous humor which doth predominate in them.

Why is a dog's tongue fit and apt for medicine and contrarywiſe an horſe's tongue peſtiferous?

'Tis by reaſon of ſome ſecret property, or elſe it may be ſaid the tongue of a dog is full of pores, and ſo doth draw and take away the viſcoſity of the wound. Some ſay that a dog hath by nature ſome tumor in his tongue, with the which by licking he doth heal; the contrary is in a horſe,

W*hy is the ſpittle white*?

By reaſon of the continual moving of the tongue, whereof heat is engendered, which makes this ſuperfluity white, as is ſeen in the froth of water.

Why is the ſpittle unſavory, and without taſte?

If it had a certain determinate taſte, then the tongue would not taſte at all, but would only have the taſte of ſpittle, and ſo could not receive other taſtes.

Why doth the ſpittle of one that is faſting heal an impoſthume?

Becauſe, According to Avicin, it is well digeſted and made ſubtle.

Why do ſome abound in ſpittle more than others?

This proceedeth of a phlegmatic complexion, which doth predominate in them, and therefore the phyſicians ſay that ſuch ſhould take care of a quotidian ague, which ariſeth from the predominacy of phlegm: the contrary is in thoſe that ſpit little becauſe heat abounds in them, which conſumes the humidity of the ſpittle; and ſo the defect of ſpittle is a ſign of a fever.

Why is the ſpittle of a man that is faſting more ſubtle than one who is full?

Becauſe the ſpittle is without the viſcoſity of meat, which is wont to make the ſpittle of one who is full groſs and thick.

From whence proceedeth the ſpittle of a man?

From the froth of the lungs, which according to phyſicians are the ſeat of phlegm.

Why are ſuch beaſts as often go together for generation very full of foam and froth?

Becauſe that then the lights and the heart are in great motion of luſt, therefore there is engendered in them much frothy matter.

Why have not birds ſpittle?

Becauſe they have very dry lungs, according to Ariſtotle, in his fifth book *de Animal.*

Why do ſuch as are called Epileptic, that is ſuch as are overwhelmed and as it were drowned in their own blood, and are diſeaſed ſavor badly and corruptly.

The anſwer according to phyſicians is, becauſe the pecant matter lieth in the head; but if he do vomit, then the matter is in the ſtomach; but if he piſs much, then the matter is in the paſſage of the urine; but if he begin to have ſeed, then it is in the veſſels of the ſeed, and according to the phyſicians do purge them.

Why doth the tongue loſe ſometimes the uſe of ſpeaking.

The anſwer is out of Hyppocrates. That this doth happen through a palſy or apoplexy, that is a ſudden effuſion of blood and of a groſs humor, and ſometimes alſo by infection of *ſpiritus animalis* in the middle of the brain, which hinders the ſpirits from being carried to the tongue; and ſo is Galen's meaning for by the expreſſion of the tongue, many actions of divers perſons are made manifeſt.

Of the ROOF of the MOUTH.

Why are fruits before they are ripe, of a naughty reliſh or bitter and after ſweet?

A naughty reliſh in taſte proceedeth of coldneſs and want of heat in groſs and thick humidity; but a ſweet taſte proceedeth of ſufficient heat, and therefore in the ripe fruit the humidity is ſubtle through the heat of the ſun, and ſuch fruits are common-

ly ſweet; but before they be ripe, and humidity is groſs or ſubtle for want of heat, the fruit is bitter and ſour.

Why are we better delighted with ſweet taſtes than with bitter, or any other?

Becauſe nature is delighted with ſweetneſs; the reaſon is becauſe a ſweet thing is hot and moiſt; and through the heat doth diſſolve and conſume ſuperfluous humidities, and by this humidity, immundicity is waſhed away, but a ſharp eager taſte, by reaſon of the cold which, predominates in it, doth bind overmuch, and prick and offend the parts of the body in purging, and therefore we do not delight in that taſte becauſe the phyſicians counſel us to eat nothing that is bitter, in the ſummer nor in a great heat; and the reaſon is, becauſe bitterneſs doth bread heat, but we ſhould eat bitter things in winter only: and therefore Ariſtotle doth ſay, that ſweet things are grateful unto nature, and do greatly nouriſh.

Why doth a ſharp taſte as of vinnegar provoke appetite, rather than any other?

Becauſe it is cold and doth cool. Now it is the nature of cold to deſire and draw, and therefore is cauſe of appetite. Mark, that there are nine kinds of taſtes, three of which proceed from heat, three from cold, and three from a temperate mean.

Why do we draw in more air than we breathe out?

Ariſtotle and Albertus in his book De Motu Cordis, do anſwer, that much air is drawn in, and ſo converted into nutriment which together with the vital ſpirits is contained in the lungs. Wherefore a beaſt is not ſuffocated ſo long as he receives air with the lungs, in which ſome part of the air remaineth alſo.

Why doth the air ſeem to be expelled and put forth, ſeeing that indeed the air is inviſible, by reaſon of its variety and thinneſs?

Becauſe the air which is received in us is mingled with vapors and fumoſity of the heart by reaſon whereof it is made thick, and ſo is ſeen, and this is proved by experience, becauſe that in winter, we ſee our breath, for the coldneſs of air doth bind the breath mixed with fumoſities, and ſo it is thickened and made groſs, and by conſequence is ſeen.

Why have ſome ſtinking breath?

The reaſon is, according to the phyſicians, becauſe there riſe evil fumes from the ſtomach; and ſometimes it doth proceed from the corruption of the airy parts of the body, as of the lungs. And the breath of the lepers is ſo infected, that it doth poiſon the birds that are near them, becauſe the inward parts are very corrupt, as appears by *Conſt. de Sin.* Now the leproſy is a nouriſhment of all the parts of the body, together with a corrupting of them; and it doth begin in the blood, and exterior members of the body.

Why are lepers hoarſe?

Becauſe that in them the inſtruments vocal are corrupted, that is the lights.

Why do men become hoarſe?

Becauſe of the rheum deſcending from the brain filling the conduit of the lights; or ſometimes through ſome impoſthumes of the throat, or rheum gathering in the neck.

Why have females of all living creatures the ſhrilleſt voice, a crow only excepted, and a woman ſhriller than a man, and a ſmaller?

According to Ariſtotle, by reaſon of the compoſition of the veins, the vocal arteries of voice is formed, as appears by a ſimilitude, becauſe a ſmall pipe ſounds ſhriller than a great: And alſo in women, becauſe the paſſage where the voice is formed is made narrow and ſtraight, by reaſon of cold, it being the nature of cold to bind; but in men the paſſage is open and wider thro' heat, becauſe it is the property of heat to open and diſſolve. It proceedeth in women through the moiſtneſs of the lungs and weakneſs of the heat. Young men and diſeaſed have ſharp and ſhrill voices for the ſame cauſe. And this is the natural cauſe why a man child at his birth doth cry *a. i.* which is a bigger ſound, and the female *e.* which is a ſlender ſound.

Why *doth the voice change in men and women; in men at* 14, *in women at* 12, *in men when they begin to yield their ſeed; in women when their breaſts begin to grow?*

Becauſe then, ſaith Ariſtotle the beginning of the voice is ſlackened and looſened; and he proves this by a ſimilitude of a ſtring of an inſtrument let down or looſed, which gives a great ſound. He proves it another way, becauſe creatures that are gelded, as eunuchs, capons, &c. have faſter and more ſlender voices than others by reaſon they want ſtones.

Why *is not a wolf hoarſe when a man looks on him?*

Becauſe a man is not ſo cold as a wolf, nor of ſo malignant a quality.

Why *doth a man who is ſlain bleed when he is ſeen of him who killed him?*

This proceedeth of divine cauſe, and not of natural, becauſe his blood calleth for vengeance againſt the murderer: but if there be any natural cauſe of it, 'tis this, the committer of this wicked fact calling it to mind, is very ſorry for it, repents him of it, is in anguiſh of mind, and in a great heat through the imagination he hath conceived, and by that means all his ſpirits do ſtir and boil, and repair into the inſtruments of the ſight of the eyes, unto the wounds which are made, which if they be freſh, do preſently fall a bleeding. Beſides, this is done by the help of the air then brethed in, which being drawn from the wound cauſeth it to bleed.

Why do ſmall birds ſing more and louder than great ones, as appears in the lark and nightingale?

Becauſe the ſpirits of ſmall birds are ſubtle and ſoft, and the organ conduit ſtraight, as appeareth in a pipe, and therefore follow eaſily any note, and ſing very ſoft.

Why doth the male ſing more than the female, as appeareth in all living creatures?

It proceedeth from the deſire of carnal copulation, becauſe that then the ſpirits are moved throughout all the body with the aforeſaid appetites and deſire. And, generally ſpeaking, the females are colder then the males.

Why do bees, waſps, flies, locuſts, and many other ſuch like inſects make a noiſe, ſeeing they have no lungs, nor inſtruments of the voice?

According to Ariſtotle, there is, in them a certain ſmall ſkin, which, when the air doth ſtrike, it cauſeth the ſound.

W*hy do not fiſh make a ſound.*

Becauſe they have no lungs, but only gills, nor yet a heart; and therefore they need not the drawing in of the air, and by conſequence they make no noiſe, becauſe that a voice is a percuſſion of the air which is drawn.

Of the NECK.

W*hy hath a living creature a neck* ?

Becauſe the neck is the ſupporter of the head, and therefore the neck is the middle between the head and the body, to the intent that by it, and by its ſinews, as by certain means and ways, motion and ſenſe of the body might be conveyed throughout all the body; and that by means of the neck, as it were by a diſtance, the heart which is very hot, might be ſeparated from the brain.

Why do ſome beaſts want necks as ſerpents and fiſhes ?

Becauſe ſuch beaſts want a heart, and therefore they want that diſtance which we have ſpoken of, or elſe we anſwer, they have a neck in ſome inward part of them, but it is not diſtinguiſhed outwardly from the heart to the head.

Why is the neck full of bones and joints ?

Becauſe it may bear and ſuſtain the head the ſtronger, alſo before the backbone is joined to the brain in the neck and from thence it receives marrow, which is of the ſubſtance of the brain.

Why have ſome beaſts long necks, as cranes, ſtorks, and ſuch like ?

Becauſe ſuch beaſts do ſeek their living in the bottom of the water; and ſome beaſts have ſhort necks, as ſparrowhawks, &c. becauſe ſuch are ravenous beaſts, and therefore for ſtrength, have ſhort necks as appeareth in the ox, which has a ſhort neck, and is therefore ſtrong.

W*hy is the neck hollow, and eſpecially before and about the tongue* ?

Becauſe there are two paſſages, whereof the one doth carry the meat into the nutritive inſtrument as to the ſtomach and liver, and is called of the Greek *Oeſephagus.*

W*hy is the artery made with rings and circles* ?

The better to bow, and give a ſounding again.

W*hy doth a chicken move a good ſpace after his head is cut off, and a man beheaded never ſtireth* ?

Becauſe a chicken and ſuch like, have ſtraight ſinews and arteries, and therefore the ſpirit of moving continueth long after the head is cut off; but men and many beaſts, have long and large ſinews and arteries, and therefore the motive ſpirits do quickly depart from them, and ſo by conſequence cannot move their bodies.

Of the SHOULDERS and ARMS.

Why *hath a man ſhoulders and arms* ?

To give and carry burdens, and do any manner of work.

Why *are his arms round* ?

For the ſwifter and ſpeedier work, becauſe that figure is fiteſt to move.

Why *are his arms thick* ?

Becauſe they ſhould be ſtrong to lift and bear burdens, or thruſt and give a ſtrong blow; ſo their bones are thick, becauſe they contain much marrow, for elſe they would be eaſily corrupted and marred; but marrow cannot ſo well be contained in ſmall bones as in great.

Why do ſuch as are diſeaſed and in grief uncover and cover their arms, and ſuch alſo as are in agony?

Becauſe ſuch are near unto death: and it is a ſign of death by reaſon of great grief, which cauſeth that uncovering, as Hippocrates doth teach, *lib. Prognoſt.*

Why do the arms become ſmall and ſlender in ſome ſickneſs, as in madmen, and ſuch as are ſick of the dropſy?

Becauſe all the parts of the body do ſuffer the one with the other, and therefore one member being in grief all the humors do concur and run thither to give ſuccor and help to the aforeſaid grief. For when the head doth ache, all the humors of the arms doth run into the head, and therefore the arms become ſmall and ſlender, becauſe they want their proper nutriment.

Why have brute beaſts no arms?

The fore feet are inſtead of arms, and in their place, or elſe we may anſwer more fitly, becauſe all beaſts have ſome parts for their defence, and to fight with, as the wolf his teeth, the cow her horns, the horſe his hinder feet, birds their beak and wings, but only man hath his arms.

Of the HANDS.

For what uſe hath a man hands, and an ape alſo which is like unto a man?

The hand is an inſtrument which a man doth eſpecially make uſe of, becauſe many things, are done by the hands, and not by any other part.

Why are ſome men ambo dexter, i. e. uſing the left hand as the right?

By reaſon of the great heat of the heart; for that makes a man as nimble of the left hand as of the right; and without doubt, are of good complexions.

Why are not women ambo dexter as well as men?

Becauſe as Galen ſaith, a woman in health that is moſt hot, is colder than the coldeſt man in health: I ſay, in health, for if ſhe have an ague, ſhe is accidentally hotter than a man.

Why are the fingers full of joints?

To be more fit and apt to receive, and keep the things received.

Why hath every finger three joints and the thumb but two?

The thumb hath three but the third is joined unto the arm, therefore it is ſtronger than the other fingers

Why are the fingers of the right hand nimbler than the fingers of the left, as Agideus ſaith?

It proceedeth from the heat which doth predominate in thoſe parts, which cauſeth great agility.

Why are the fingers thicker before meat than after, as Albertus ſaith?

Becauſe a man who is faſting, is full of bad humors, which puff up the parts of the body, and fingers alſo; but when the humors are expelled through meat, the fingers become more ſlender. Add for the ſame reaſon, a man who is faſting, is heav-

ier than when he hath meat in his belly, as is moſt plain in faſters. Another reaſon may be given, Becauſe that after meat the heat is departed from the outward parts of the body into the inward, to help digeſtion, and the outward and external parts become ſlender; but after digeſtion is made, the blood turneth again to the exterior parts, and then they become great again?

Why are ſome men left handed?

Becauſe the heart ſendeth out heat into the right ſide, but more into the left, and doth alſo work a ſlenderneſs and ſubtilty on the left ſide.

Of the NAILS.

From whence do nails proceed?

Of the fumoſity and humors, which are reſolved, and go into the excrements of the fingers and they are dried through the power of the external air, and brought to the hardneſs of a horn.

Why do the nails of old men grow black and pale?

Becauſe the heat of the heart decayeth, which decaying, their beauty decayeth alſo.

Why are men judged to be of good or evil complexion by the color of the nails?

Becauſe they give witneſs of the goodneſs or badneſs of the heart and therefore of the complexion; for, if they be ſomewhat red, they betoken choler well tempered; but if they be yellowiſh or black they ſignify melancholy.

Why *do white ſpots appear in the nails?*

Through mixture of a phlegm with the nutriment.

Of the BREAST.

For what reaſon is the breaſt hollow?

Becauſe there is the ſeat of the ſpiritual and ærial membres which are moſt noble, as the heart and lights; and therefore becauſe theſe might be kept from hurt, it was neceſſary that the breaſts ſhould be hollow.

Why hath man the broadeſt breaſt of all living creatures?

Becauſe the ſpirits of men are weak and ſubtle, and therefore do require a ſpacious place wherein they are contained, as the breaſt is.

Why are the breaſts of beaſts round?

Becauſe they are in continual motion.

Why have women narrower breaſts than men?

Becauſe there is more heat in men, which doth naturally move to the uppermoſt part of them, making thoſe parts great and large, and therefore a great breaſt is a token of courage, as in the lion and bull; but in women cold predominates, which naturally tends downwards, and therefore women often fall on their backſide, becauſe the hinder parts are groſs and heavy, by reaſon of cold aſcending thither; but a man commonly falls on his breaſt, by reaſon of its greatneſs and thickneſs.

Of the PAPS and DUGS.

Why are paps placed upon the breaſts?

Becauſe the breaſt is the ſeat of the heart, which is moſt hot, and therefore the paps grow there, to the end that the menſes being conveyed thither, as being near to the heat of the heart ſhould the ſooner be digeſted, and converted into the matter and ſubſtance of milk.

Why are the paps below the breaſt in beaſts and above the breaſt in women?

Becauſe a woman goes upright and has two legs only, and therefore, if her paps ſhould be below her breaſts, they would hinder her going, but beaſts have four feet, and therefore they are not hindered in their going.

Why have not men as great breaſts and paps as women?

Becauſe a man hath no monthly terms, and therefore hath no veſſel deputed for them.

Which paps are beſt for children to ſuck, great or little ones, or the mean between them both?

In great ones the heat is diſperſed, and there is no good digeſtion of milk; but in ſmall ones the power and force is ſtrong, becauſe a virtue united is ſtrongeſt, and by conſequence there is good working and digeſtion of the milk, and therefore, the ſmall are better than the great ones, but yet the mean ones are beſt of all, becauſe every mean is beſt.

Why do the paps of young women begin to grow about 13 or 15 years of age, as Albertus ſaith?

Becauſe then the flowers have no courſe to the teats, by which the young one is nouriſhed, but follow their ordinary courſe, and therefore wax ſoft.

Why *hath a woman who is with child of a* boy *the right pap harder than the left?*

Becauſe the male child is conceived in the right ſide of the mother, and therefore the flowers do run to the right pap, and make it hard.

Why doth it ſhew weakneſs of the child when the milk doth drop out of the paps before the woman be delivered?

Becauſe the milk is the proper nutriment of the child in the womb of the mother, and therefore, if the milk run out, it is a token that the child is not nouriſhed, and is therefore weak.

Why doth the hardneſs of the paps betoken the health of the child in the womb?

Becauſe the flowers are converted into milk, and that milk doth ſufficiently nouriſh the child, and thereby the ſtrength is ſignified.

Why hath a woman but two paps, and ſome brute beaſts ten or more?

Becauſe for the moſt part, a woman hath but one child, either boy or girl, and therefore one pap is ſufficient, or two; but beaſts have many young ones, and therefore ſo many teats.

Why are women's paps hard when they be with child, and ſoft at other times?

They ſwell then and are puffed up becauſe the much moiſture which proceeds from the flowers doth run into the paps, which at other ſeaſons remaineth in the womb, and is expelled by the place deputed for that end.

By what means doth the milk of the paps come to the matrix or womb?

According to Hippocrates, becauſe there is a certain knitting and coupling of the pap with the womb, and there are certain veins which the midwives do cut in the time of the birth of the child, and by thoſe veins the milk doth flow in at the navel of

the child, and ſo it receives nutriment by the navel. Some ſay the child in the womb is nouriſhed at the mouth, but it is falſe, becauſe that ſo it ſhould void excrements alſo.

Why is it a ſign of a male child in the womb when the milk that runneth out of the woman's breaſt is thick and not much, and a female when it is thin?

Becauſe a woman that goeth with a boy hath great heat in her, which doth perfect the milk, and make it thicker, but ſuch as go with a girl hath not ſo much heat, and therefore the milk is undigeſted, watery, and thin, and will ſwim above the water if it be put into it.

Why is the milk white, ſeeing the flowers are red which it is engendered of?

Becauſe blood which is well purged and concocted becometh white as appeareth in fleſh whoſe proper color is red, and being boiled is white. Another anſwer is, every humor which is engendered of ſuch part of the body, is made like unto that part in color where it is engendered, as near as it can be, but becauſe the fleſh of the paps is white, therefore the color of the milk is white.

Why doth a cow give milk more abundantly than other beaſts?

Becauſe ſhe is a great eating beaſt; and where much monthly ſuperfluity is engendered, there is much milk, becauſe it is nothing elſe but that blood purged and tried; and becauſe a cow has much of this monthly blood ſhe has much milk.

Why is not milk wholeſome?

According to the opinion of Galen it is for divers reaſons; 1ſt, Becauſe it doth curdle in the ſtomach, wherefore an evil breath is bred. But to this Hippocrates gives this remedy, ſaying, if the third part of it be mingled with running water, then it is not hurtful. 2dly, Becauſe the milk doth ſour in the ſtomach, and breeds evil humors which infect the breath.

Why is milk bad for ſuch as have the headache?

Becauſe it is eaſily turned into great fumoſities, and hath much terreſtrial ſubſtance in it which aſcending doth cauſe the headache.

Why is milk fit nutriment for infants?

Becauſe it is a natural and uſual food, and they were nouriſhed by the ſame in the womb.

For what reaſon are the white meats made of a new milked cow good.

Becauſe milk at that time is very ſpungy, and does as it were purge.

Why *is the milk nought for the child, if the woman uſe carnal copulation?*

Becauſe in time of carnal copulation, the beſt part of the milk goes to the ſeed veſſels, and to the womb, and the worſt remains in the paps which doth hurt to the child.

Why is the milk of brown women better than that of white?

Becauſe brown women are hotter than others, and heat purges the milk.

Why do phyſicians forbid the eating fiſh and milk at the ſame time?

Becauſe they are phlegmatic, and are apt to produce a leproſy.

Why have not bird and fiſh milk and paps?

Becauſe paps would hinder the flight of birds: fiſh alſo have neither paps nor milk, but the females caſt much ſpawn on which the male touches with a ſmall gut: which cauſes their kind to be infinite in ſucceſſion.

Of Backs.

Why have beaſts backs?

For three cauſes; firſt, Becauſe the back ſhould be the way and means of body, from which all the ſinews of the back bone are extended and ſpread; as appears in ſuch as are hanged, whoſe ſinews hang whole in the chine or back bone, when they are in pieces, or without fleſh. 2dly. Becauſe it ſhould be a guard and defence for the ſoft parts of the body, as of the ſtomach, liver, lights, and ſuch like. 3dly. Becauſe it ſhould be the foundation of all the bones, becauſe we ſee other bones, as the ribs, faſtened to the back bone.

Why hath man above all other creatures a broad back which he can lie upon, which no beaſt can do?

Becauſe a broad back doth anſwer a broad breaſt; if therefore a man ſhould have a ſharp back like unto a beaſt, he would be of an unſeeming ſhape, and therefore it is requiſite that he have a broad back.

Why hath a man that lieth on his back horrible viſions?

Becauſe the paſſage or ſign of the fantaſy is open, which is in the fore part of the brain, and ſo the fantaſy is deſtroyed, and then thoſe viſions follow. Another reaſon is becauſe when a man lieth on his back, the humors are diſtributed and moved upward where the fantaſy is, which by that means is diſtributed. To lie on the back diſpoſes a man to leproſy, madneſs, and to an incubus or night mare, which is a paſſion of the heart wherein a man thinks himſelf to be ſtrangled in his ſleep, and ſomething lying heavy on him, which he would put off.

Why hath the back bone ſo many joints or knots called Spondelia by the phyſicians?

For the more eaſy moving and bending of it; and therefore they ſay amiſs, who ſay, that elephants have no ſuch joints, for without them they could not move.

Why do fiſh die after their back bone is burſt?

Becauſe in fiſh the back bone is inſtead of the heart. Now, the heart is the firſt thing that lives, and the laſt that dies, and therefore when the bone is broke, fiſh can live no longer.

Why does a man die ſoon after the marrow is hurt or periſhed?

Becauſe the marrow proceeds from the brain, which is a principal part of a man; as appears, 1ſt, becauſe the marrow is white like the brain: and 2dly, becauſe it hath a thick ſkin or rind, which that called *nucha* has not, which differs from the marrow, becauſe of two coverings like the brain, called *pia mater*, and *dara mater*.

Why have ſome men the piles?

Thoſe men are cold and melancholy, which melancholy firſt paſſes to the ſpleen, its proper ſeat, but there cannot be retained for the abundance of blood; for which reaſon, it is conveyed to

the back bone, where there certain veins which terminate in the back, and receive the blood; when thoſe veins are full of the melancholy blood, then the conduits of nature are opened, and the blood iſſues out once a month, like women's terms. Thoſe men who have this courſe of blood, are kept from many infirmities as dropſy, plague, &c.

Why are the Jews much ſubject to this diſeaſe?

Divines ſay, becauſe they cried at the death of Chriſt, "Let his blood be upon us and our children." Another reaſon is becauſe, the Jews eat much phlegmatic and cold meats, which breed melancholy blood, but it is purged with this flux; a third reaſon is, motion cauſes heat, and heat digeſtion, but ſtrict Jews never move, labor, nor converſe with men, beſides they are in continual fear leſt we ſhould revenge the death of our Saviour, which breeds a coldneſs in them, and hinders digeſtion, cauſing melancholy blood, which is by this means purged out.

Of the HEART.

Why *are the heart and lungs called lively parts of the body*?

From the word Spiritus, which ſignifies breath, life, or ſoul, and becauſe the vital ſpirits are engendered in the heart. Yet that's no good anſwer, for the liver and brain might be ſo called becauſe the liver giveth nutriment, and the brain ſenſe and life; the conſequence is clear, for the vital ſpirits are engendered in the liver, and the ſenſible and animal ſpirits in the brain.

Why are the lungs light, ſpungy and full of holes?

That the air may the better be received in them for cooling the heart, and expelling humors becauſe the lungs are the fan of the heart: and as a pair of bellows is raiſed up by taking in the air, and ſhrunk by blowing it out, ſo likewiſe the lungs drawin the air to cool the heart and to caſt it out, leſt through too much heat of the air drawn in, the heart ſhould be ſuffocated.

Why is the fleſh of the lungs white?

Becauſe they are in continual motion.

Becauſe the lungs are no part for themſelves, but for the heart; and therefore it were ſuperfluous for thoſe creatures to have lungs who have no hearts: but nature is never wanting in things neceſſary, nor abounds in ſuperfluities.

Why do ſuch creatures as have no lungs want a bladder?

Becauſe ſuch drink no water to make their meat digeſt, but only for their tempering their food, and therefore they want a bladder and urine, as appears in ſuch birds as do not drink at all, viz. falcon and ſparrow hawk.

Why is the heart in the midſt of the body?

Becauſe it ſhould impart life to all the parts of the body, and therefore it is compared unto the ſun, which is placed in the midſt of the planets, to pour light unto them all: therefore the Pythagoreans ſtiling the heavens a great living creature, ſay, the ſun is the heart thereof.

Why only in men is the heart on the left ſide?

To the end that the heat of the heart ſhould mitigate the coldneſs of the ſpleen, for the ſpleen is the ſeat of melancholy, which is on the left ſide alſo.

Why is the heart firſt engendered, for according to Ariſtotle the heart doth live firſt and die laſt?

Becauſe as Ariſtotle ſaith, *de juvent, et fenect.* the heart is the beginning and the origin of life, and without it no part can live. According to the Philoſopher, of the ſeed retained in the matrix there is firſt engendered a ſmall ſkin, which compaſſeth the ſeed, whereof firſt the heart is made of the pureſt blood; then of blood not ſo pure, the liver; and of thick and cold blood the marrow and brain.

Why are beaſts bold that have little hearts?

Becauſe in a little heart the heat is well united, and vehement and the blood touching it doth quickly heat it, and is ſpeedily carried into other parts of the body, which gives courage and boldneſs.

Why are creatures with a ſmall heart timorous as the hare?

The heart is diſperſed in ſuch, and not able to heat the blood that cometh to it and ſo fear is bred.

How comes it that the heart is continually moving?

Becauſe in it there is a certain ſpirit which is more ſubtle than air, which by reaſon of its thickneſs and rarefaction, ſeeks a larger ſpace, filling the hollow room of the heart, whereof the dilating and opening of the heart doth follow; and becauſe the heart is earthly, the thruſting and ceaſing to move, its parts are at reſt, tending downwards. Galen gives an experiment of an acorn, which if put into the fire, the heat diſſolves its humidity, therefore it doth occupy a greater place, ſo that the rind cannot contain it but puffs up, throws it into the fire; the like of the heart; Therefore note, that the heart of a living creature is triangular in a manner, having its leaſt part towards the left ſide and the greateſt towards the right, and doth alſo open and ſhut in the leaſt part, by which means it is in continual motion: the firſt motion is by the phyſicians called *Diaſtole*, that is extending the heart; the other *Syſtole*, that is, ſhutting the heart; and from theſe two all the motions of the body proceed, and that of the pulſe which phyſicians feel.

Why are great beaſts lean?

The natural heat proceeding from the heart conſumes that natural humidity which ſhould be converted into fat.

How comes it that the fleſh of the heart is ſo compact and knit together?

It is becauſe in a thick compact ſubſtance heat is ſtrongly received and united, as appears in other things: and becauſe the heart with its heat ſhould moderate the coldneſs of the brain, it is made of that hard fleſh which is apt to keep a ſtrong heat.

How comes the heart to be the hoteſt part of all living creatures.

It is ſo compacted as to receive heat beſt, becauſe it ſhould mitigate the coldneſs of the brain.

Why is the heart the beginning of life.

Becauſe in it the vital ſpirit is bred, which is the heat of life, and therefore according to the opinion of Auguſtine, the heart hath two recepticles the right and the left: the right hath more blood than ſpirits, which ſpirits it engendered to give life, and vivify the body.

Why is the heart long and ſharp like a pyramid.

A round figure hath no angles, therefore the heart is round for fear any poiſon or hurtful matter ſhould be retained in it;

and, as Ariſtotle affirms, becauſe that figure is fitteſt for motion.

How comes the blood to be chiefly in the heart?

The blood is in the heart, as in its proper or efficient place which ſome attribute to the liver, and therefore, the heart doth not receive blood of any other part, but all other parts of it.

How happens it that ſome creatures want a heart?

Although they have no heart, yet they have ſomewhat which anſwers it, as appears in eels and fiſh which have the back bone inſtead of a heart.

Why doth the heart beat in ſome creatures when the head is cut off, as appears in birds and hens?

Becauſe the heart is what lives firſt and dies laſt, and therefore beats more than other parts.

Why doth the heat of the heart ſometimes fall of a ſudden, as in thoſe who have the falling ſickneſs?

This proceeds from a defect of the heart itſelf and of certain ſmall ſkins with which it is covered, which being infected and corrupted, the heart falleth on a ſudden; and ſometimes it happens by reaſon of the parts adjoining, and therefore, when any venomous humor goes out of the ſtomach that hurts the heart and parts adjoining, it cauſes this fainting. The diſpoſition of the heart is known by the pulſe, for, a ſwift beating pulſe ſhews the heat of the heart, and a ſlow beating one denotes coldneſs; therefore, a woman that is in health, has a ſlower and weaker pulſe than a man, as ſhall appear hereafter.

Of the STOMACH.

For what reaſon is the ſtomach large and round?

Becauſe in it the food is firſt concocted or digeſted, as it were in a pot, that what is pure may be ſeparated from that which is not, and therefore, according to the quantity of the food the ſtomach is enlarged.

Why is the ſtomach round?

Becauſe if it had angles and corners, food would remain in it, and breed humors, ſo a man would never want agues: which humors nevertheleſs are evacuated, lifted up, and conſumed, and not hid in any ſuch corners, by reaſon of the roundneſs of the ſtomach.

How comes the ſtomach to be full of ſinews?

Becauſe the ſinews can be extended and enlarged, and ſo is the ſtomach when it is full, but, when empty, it is drawn together, and therefore nature provides thoſe ſinews.

How comes the ſtomach to digeſt?

Becauſe of the heat which is in it, which comes from the liver and the heart. For we ſee in metals the heat of the fire takes away the ruſt and droſs from iron, the ſilver from tin, and gold from copper: ſo that by digeſtion the pure is ſeparated from the impure

For what reaſon does the ſtomach join the liver?

Becauſe the liver is very hot, and with its heat helps digeſtion, and provokes an appetite.

Why are we cold commonly after dinner?

Becauſe then the heat goes to the ſtomach to further digeſtion, and ſo other parts become cold.

Why is it hurtful to ſtudy ſoon after dinner ?

Becauſe when the heat labors to help the imagination, it ceaſeth from digeſting the food ; ſo that people ſhould walk ſome time after meals.

How come women with child to have an inordinate deſire of eating coals, aſhes, and ſuch like ?

It flows from the humors of the ſtomach ; and becauſe women with child have corrupt humors, therefore they deſire the like things.

How cometh the ſtomach ſlowly to digeſt fat meat.

Becauſe it ſwims in the ſtomach. Now, the beſt digeſtion is at the bottom of the ſtomach, where the fat deſcends not : ſuch as eat fat meat are very ſleepy, by reaſon digeſtion is hindered.

Why is all the body worſe when the ſtomach is uneaſy.

Becauſe the ſtomach is knit with the brain, heart, and liver which are the principal parts in man ; and therefore, when it is not well, the others are evil diſpoſed. Another anſwer is, that if the firſt digeſtion be hindered, the others are alſo hindered ; for, in the firſt digeſtion, is the beginning of the infirmity that is in the ſtomach.

Why are young men ſooner hungry than old men.

Young men do digeſt for three cauſes, firſt, growing ; then, for the reſtoring of life ; and laſtly, for converſation of life, as Hippocrates and Galen do ſay : elſe we anſwer, that young men are hot and dry, and therefore, heat doth digeſt more, and of conſequence they deſire more.

Why do phyſicians preſcribe that men ſhould eat when they have an appetite.

Becauſe much hunger and emptineſs will fill the ſtomach with naughty rotten humors which are drawn unto it inſtead of meat; which do eaſily appear, becauſe if we faſt over night, we have an appetite to meat, but in the morning none. That is therefore a token that the ſtomach is filled with naughty humors, and eſpecially its mouth which is no true filling, but a deceitful one. And therefore, after we have eaten a little, our ſtomach comes to us again ; and then the proverb is, one morſel draweth down another : for the firſt morſel having made clean the mouth of the ſtomach, doth provoke the appetite.

Why do phyſicians preſcribe that we ſhould not eat too much at a time, but by little and little.

Becauſe when the ſtomach is full, the meat doth ſwim in it, which is a dangerous thing. Another reaſon is, that as very green wood doth put out the fire, ſo much meat choaks the natural heat and puts it out ; and therefore the beſt phyſic is, to uſe temperance in eating and drinking.

Why do we deſire change of meats according to the change of times ; as in winter, beef, pork, mutton ; and in ſummer, light meats, as veal, lamb, &c.

Becauſe the complexion of the body is altered, and changes according to the time of the year. Another anſwer is, that this proceeds from the quality of the ſeaſon, becauſe the cold winter doth cauſe a better digeſtion, and the ſtomach and belly is hotter in winter, by reaſon of the compaſſing cold, as Hippocrates and Ariſtotle doth teach.

Why ſhould not the meat we eat be as hot as pepper and ginger.

Becauſe hot meat doth burn the blood, and diſpoſe it to a leproſy. So contrarywiſe, meat too cold doth mortify and congeal the blood. And our meat ſhould not be over ſharp, becauſe it procureth old age, and too much ſauce doth burn the entrails, and procureth often drinking, as raw meat doth; and over ſweet meats do conſtipate and cling the veins together.

Why is it a good cuſtom to eat cheeſe after dinner, and pears after all meat?

Becauſe cheeſe, by reaſon of its earthineſs and thickneſs tendeth down towards the bottom of the ſtomach, and ſo putteth down the meat, and the like of pears. Note, that new cheeſe is better than old, for the old dry ſoft cheeſe is very naughty, and procureth the headach; and ſtopping of the liver; and the older the worſe. Whereupon it is ſaid, that the cheeſe is naught, and digeſteth all things but itſelf.

Why are nuts good after fiſh?—The verſe is,

After fiſh nuts; after fleſh cheeſe.

Becauſe fiſh is of a hard digeſtion, and doth eaſily putrify and corrupt; and nuts help digeſtion, becauſe they are ſomewhat hot; fiſh is poiſoned ſometimes, and nuts are a remedy againſt a poiſon. And note, they ſhould be of a clear ſtony water, and not of a cold ſtanding muddy water, and ſhould be ſo in wine and parſley, and ſo it hurteth leaſt.

Why is it unwholeſome to ſtay long for one diſh after another, and eat of divers kinds of meat.

Becauſe the firſt begins to digeſt when the laſt is eaten, and ſo the digeſtion is not equally made, and therefore the meat digeſted beginneth to corrupt. But yet this rule is to be noted, touching the order of meat, that if there be any diſhes whereof ſome are light of digeſtion, as chickens, kid, veal, ſoft eggs, and ſuch like, theſe meats ſhould be firſt eaten; but groſs meats, as veniſon, bacon, beef, roaſted pork, hard eggs, and fried eggs, ſhould be eaten laſt. And the reaſon is, becauſe that if they ſhould be firſt ſerved and eaten, and were digeſted, they would hinder the digeſtion of the others; and the light meats not digeſted would be corrupted in the ſtomach, and kept in the ſtomach violently, whereof would follow belching, loathing, headach, bellyach, and great thirſt. And by conſequence, it is very hurtful too at the ſame meal to ſup milk and drink wine, becauſe they diſpoſe a man to leproſy.

Which is beſt for the ſtomach, meat or drink.

Drink is ſooner digeſted than meat, becauſe meat is of greater ſubſtance, and more material than drink, and therefore meat is harder to digeſt.

Why is it good to drink after dinner.

Becauſe the drink ſhould make the meat readier to digeſt. For, if a pot be filled with fiſh or fleſh without liquor, then both the pot and meat is marred. The ſtomach is like unto a pot which doth boil meat, and therefore phyſicians do counſel to drink at meals.

Why is it good to forbear a late ſupper?

Becauſe there is no moving or ſtirring after ſupper, and ſo the meat is not ſent down to the bottom of the ſtomach, but remain-

eth undigeſted, and ſo breeds hurt; and therefore a light and ſhort ſupper is beſt.

How comes ſome men to evacuate clear meat?

By reaſon of the weakneſs of nature and expulſion; which diſeaſe is called Lienteria.

Of the BLOOD.

Why is it neceſſary that every living thing that hath blood, hath alſo a liver?

According to Ariſtotle, becauſe the blood is firſt made in the liver, its ſeat, and is drawn from the ſtomach by certain principal veins, and ſo engendered.

For what reaſon is the blood red.

Firſt, it is like the part in which it was made, *i. e.* the liver, which is red, then it is likewiſe ſweet becauſe it is well digeſted and concocted; but if it have a little earthy matter mixed with it, that makes it ſomewhat ſalt, as appears in Ariſt. *Lib. Meteor.*

How comes women's blood to be thicker than men's.

Their coldneſs thickens, binds, congeals, and joins it together.

How comes the blood in all parts of the body through the liver, and by what means.

Through the principal veins, as the veins of the head, liver, &c. to nouriſh all the body.

Of the URINE.

How doth the urine come into the bladder, ſeeing the bladder is ſhut.

Some ſay by ſweating, and it ſeems to be true. Others ſay it comes by a ſmall ſkin in the bladder, which opens and lets in the urine. Urine is a certain and not deceitful meſſenger of the health or infirmity of man. Hippocrates ſays, that men make white urine in the morning, and before dinner red, but after dinner pale, and likewiſe after ſupper; for there is divers colors.

How doth the leproſy proceed from the liver.

Becauſe it doth greatly engender the brains, and breed the falling ſickneſs and apoplexy.

Why is it hurtful to drink much water.

Becauſe one contrary doth hinder and expel another; for water is very cold, and lying ſo on the ſtomach hinders digeſtion.

Why is it unwholeſome to drink new wine; and why doth it very much hurt the ſtomach.

One reaſon is, it cannot be digeſted, therefore it cauſeth the belly to ſwell, and in ſome ſort the bloody flux; ſecondly, it hinders making water, but to drink good wine is wholeſome.

Why do phyſicians forbid us to labor preſently after dinner.

For three reaſons; firſt becauſe motion hinders the virtue and power of digeſtion; ſecondly, becauſe ſtirring immediately after dinner cauſeth the parts of the body to draw the meat raw to them, which often breeds ſickneſs: and thirdly, becauſe motion makes the food deſcend before it is digeſted: but after ſupper it is good to ſtir, by reaſon we ſoon after go to ſleep, therefore ſhould walk a little, that the food may go to the bottom of the ſtomach.

Why is it good to ſtir after dinner.

It makes a man well diſpoſed, fortifies and ſtrengthens the natural heat, cauſing the ſuperfluity in the ſtomach to deſcend: wherefore Avicen ſays, ſuch as neglect this exerciſe fall into inflammation of the heart.

Why is it wholeſome to vomit as ſome ſay.

Becauſe it purges the ſtomach of all naughty humors, expelling them, which would breed agues if they ſhould remain in it. Avicen ſays, a vomit purges the eyes and head, clearing the brain.

How comes ſleep to ſtrengthen the ſtomach and the digeſtive faculty.

Becauſe in ſleep the heat draws inwards, and helps digeſtion; but when we awake, the heat remains, and is diſperſed through the body.

Of the GALL and SPLEEN.

How comes living creatures to have a gall.

Becauſe choleric humors are received into it, which, through their acidity, help the guts to expel ſuperfluities, alſo it helps digeſtion.

How comes the jaundice to proceed from the gall.

The humor of the gall is bluiſh and yellow, therefore when its pores are ſtopt, the humors cannot go into the ſack thereof, but is mingled with the blood, wandering throughout all the body, and infecting the ſkin.

Why hath not a horſe, mule, aſs, or cow a gall.

Though thoſe creatures have no gall in one place, as in a purſe or veſſel, yet they have one diſperſed in ſmall veins.

How comes the ſpleen to be black.

It is occaſioned by a terreſtrial and earthy matter of black color, as Ariſtotle ſays. Another reaſon is, according to phyſicians, the ſpleen is the recepticle of melancholy, and that is black.

Why is he lean who hath a large ſpleen.

Becauſe the ſpleen draws much water to itſelf, which would turn to fat; therefore contrarywiſe, men that have but a ſmall ſpleen are fat.

Why does the ſpleen cauſe men to laugh.

Iſodorus ſays we laugh with the ſpleen, we are angry with the gall, we are wiſe with the heart, we love with the liver, we feel with the brain, and ſpeak with the lungs, that is, the cauſe of laughing, anger, love, wiſdom, ſpeech, and feeling proceeds from the ſpleen, gall, liver, lungs, and brain.

The reaſon is, the ſpleen draws much melancholy to it, being its proper ſeat, which melancholy proceeds from ſadneſs, and is there conſumed, and the cauſe failing, the effect doth ſo likewiſe. And by the ſame reaſon, the gall cauſes anger; for choleric men are often angry, becauſe they have much gall. For the better underſtanding of this, note, that there are four humors in man, namely, blood, choler, phlegm, and melancholy; each has its particular recepticle. Of a hot and dry ſubſtance, choler is engendered, which goes to the gall; but of a cold and dry humor, melancholy is engendered, and goes to the ſpleen: of a cold and moiſt humor, phlegm is engendered, and goes to the lungs for its reception, nor (as phyſicians ſay) to the ſpleen;

but the blood, which is the moſt noble humor is engendered in the liver, which is its proper place.

Of Carnal Copulation.

Why do living creatures uſe carnal copulation.

Becauſe it is moſt natural to beget their like; for, if copulation were not, all procreation had ſunk ere now.

What is this carnal copulation.

It is a mutual action of male and female, with inſtruments ordained for that purpoſe, to propagate their kind; and therefore divines ſay, it is a ſin to uſe that act for any other end.

Why is this action good in thoſe who uſe it lawfully and moderately.

Becauſe, ſay Avicen and Conſt. it eaſes and lightens the body, clears the mind, comforts the head and ſenſes, and expels melancholy. Therefore ſometimes through the omiſſion of this act dimneſs of ſight doth enſue, and giddineſs; beſides the ſeed of a man retained above its due time, is converted into ſome infectious humor.

Why is immoderate carnal copulation hurtful.

Becauſe it deſtroys the ſight, dries the body, and impairs the brain; often cauſes fevers, as Avicen and experience ſhew; it ſhortens life too as is evident in the ſparrow, which by reaſon of its often coupling, lives but three years.

Why doth carnal copulation injure melancholy or choleric men, eſpecially thin men.

Becauſe it dries the bones much which are naturally ſo. On the contrary, it is good for the phlegmatic and ſanguine, as Avicen ſays, becauſe they abound with that ſubſtance which by nature is neceſſarily expelled. Though Ariſtotle affirms, that every fat creature has but little ſeed becauſe the ſubſtance turns to fat.

Why do not female brute beaſts covet carnal copulation after they are great with young.

Becauſe then the womb or matrix is ſhut, and deſire doth ceaſe.

Why ſhould not the act be uſed when the body is full.

Becauſe it hinders digeſtion, and it is not good for a hungry belly becauſe it weakens him.

Why is it not good after birty.

Becauſe then the pores are open, and the heat diſperſes through the body, yet after bathing it cools the body very much.

Why is it not proper after vomiting or looſeneſs.

Becauſe it is dangerous to purge twice in one day: but ſo it is in this act the reins are purged, and the guts by the vomit.

Why are wild beaſts furious when they couple. as appears in aſſes which bray; and harts, who are mad almoſt, as Hippocrates ſays.

Their blood is kindled with deſire, and nature alſo labors to expel ſuperfluities in them, which diſpoſe to anger and madneſs; therefore the act done, they are tame and gentle.

Why is there ſuch delight in the act of venery.

Becauſe this act is a baſe and contemptible thing in itſelf, inſomuch that all creatures would naturally abhor it, were there no pleaſure in it, and therefore nature readily uſes it, that all kinds of living creatures ſhould be maintained and kept.

Why do such as use it often, take less delight in it than those who come to it seldom ?

For three reasons: first, because the passages of the seed, are over large and wide, therefore it makes no stay there, which would cause the delight Secondly, because that through often evacuation there is little seed left, therefore no delight. Thirdly, because such instead of seed, cast out blood undigested and raw, or some other watery substance, which is not hot, and therefore affords no delight.

Can this carnal copulation be done by the mouth. so that beasts may conceive thereby, as some say of pigeons, that by kissing they do it, and conceive. Some say that it is true in the weasel or ermine.

According to Aristotle it is false; for, though pigeons do kiss by the beak, yet they do not couple this way nor conceive. And because the weasel carries his young ones from place to place in his mouth, they are of that opinion: But, Aristotle says, whatever goeth in at the mouth is consumed by digestion, and if the seed should go in at the mouth, then that would be consumed by digestion. The major part is plain, the conclusion doth hold true.

Of the SEED of MAN or BEAST.

How or of what cometh the seed of man.

There are divers opinions of philosophers and physicians in this point. Some say it is a superfluous humor of the fourth digestion; others say, that the seed is pure blood flowing from the brain concocted and whitened in the testicles; and some say, it is the superfluity of the second or third digestion; but Aristotle says, the seed is always the superfluity of the last nutriment, that is of blood dispersed througout the body, and comes chiefly from the heart, liver, and brain: which is argued, because those parts are greatly weakened dy ejecting seed. and therefore it appears that carnal copulation is not good, but some think, when moderately used. it is very wholesome.

Why is a man's seed white and a woman's red.

'Tis white in man by reason of his great heat and quick digestion, because rarified in the testicles; but a woman's is red, because 'tis the superfluity of the second digestion, which is done in the liver. Or else we may say, it is because the terms corrupt undigested blood, and hath its color.

Doth the seed of man come from the parts of the body or from humors.

Some say from the parts of the body, and that a lame man begets a lame child; and if the father hath a scar, the child hath one also, which could not be, if the seed did not fall from the parts of the body Others say, it comes from the humors, by reason it is made of the last nutriment, and that is no part but a humor. As for lameness or scars, they proceed from imagination of the mother at the time of carnal copulation.

How comes the imagination of the mother to cause her to bring forth a blackmoor, as Albertus Magnus reports of a queen who in the act of carnal copulation, imagined a black being painted, and in her sight.

As it is ſaid, the imagination of a fall, makes a man fall, and the imagination of a leproſy makes a man a leper; ſo, in this the imagination is above the forming power, and therefore the child born followeth the imagination, and not the power of forming and ſhaping, becauſe 'tis weakeſt.

Doth the man's ſeed enter into the ſubſtance of the child.

The ſeed of both father and mother go into the ſubſtance of the child in the womb, as cream goeth to the ſubſtance of the cheeſe: Yet this opinion doth ſeem to be of force, therefore, we ſay, the ſeed doth not go into the ſubſtance of the child: and it is proved thus, becauſe that ſo the matter and the efficient cauſe ſhould be all one, which is againſt the philoſopher. The conſequence is good becauſe the ſeed is the efficient cauſe of the houſe, and therefore is not the material cauſe of the child. This is proved another way; as there is the ſelf ſame material cauſe of nouriſhment and generation; ſo we have our being and nouriſhment of the ſame matter: But the ſeed cannot be the material cauſe of nouriſhment, according to Averrois, therefore not of the being. And as both ſeeds are ſhut up in the womb, ſo that of the man diſpoſeth and prepares the woman's to receive the form, perfection, or ſoul, which being done it is converted into a humidity that is breathed out by the pores of the matrix.

How come females to have monthly courſes.

They are cold in reſpect of men, and as their nouriſhment cannot all be converted into blood, a great part thereof turns to menſes, which are monthly expelled.

For what reaſon do not the courſes come before thirteen.

Becauſe young women are hot, and digeſt all their nouriſhment therefore they have them not before that age.

For what reaſon do they leave them at about fifty.

Some anſwer that old women are barren, and therefore they ceaſe; but a better anſwer is, that then nature is weak in them, and therefore they cannot expel them: there is great ſtore of immundities bred in them, which lies in a lump: this makes them troubled with coughs and other infirmities. Men ſhould refrain their uſe at thoſe times.

Why have not breeding women the menſes.

Becauſe that then they turn into milk, and into the nouriſhment of the child: for if a woman with child have them, it is a ſign ſhe will miſcarry.

Why are they termed menſtrua.

From the word *menſis* a month, becauſe it is a time which meaſures the moon, as ſhe ends her courſe in 29 days and 14 hours. The moon hath dominion over moiſt things, and the menſes are humid, and moiſt things increaſe and decreaſe as the moon does.

Why do they continue longer with ſome than others, with ſome ſix or ſeven but commonly with all three days.

The firſt are colder, therefore they increaſe moiſt in them, and conſequently are longer in expelling; other women are more hot, and therefore they have fewer, and are ſoon expelled.

Where are the terms retained before they are run.

Some ſay in the matrix or womb: but Averrois ſays, the matrix is the place for generation, and that thoſe terms further not

generation at all; therefore he aſſerts that there are certain veins about the backbone which retain them: a ſign of which is, thoſe women, at that time have great pain in their backs.

Are the menſes which are expelled, and thoſe of which the child is engendered, all one.

No: becauſe the one are unclean, and unfit for that purpoſe, but the other very pure and clean, therefore fitteſt for generation.

Why do thoſe got with child, when they have the terms upon them, bring forth weak and leprous children

Becauſe they are venomous; ſo the cauſe appeareth in the effect.

Why have women their terms, ſome at the new moon, ſome at the full, and others at the wain.

By reaſon of their ſeveral complexions; and though all women in reſpect of men are phlegmatic, yet ſome are more ſanguine than others, ſome are choleric. As months have their quarters, ſo have women their complexions: one of a ſanguine complexion hath her terms in the firſt quarter, a choleric in the ſecond, a melancholic in the third, &c.

Why have the ſanguine theirs in the firſt quarter.

Becauſe ſaith Galen, every ſuch thing added to ſuch a thing doth make it more ſuch; therefore the firſt quarter of the moon increaſeth blood in a ſanguine complexion, and then ſhe expels it.

How do they come in the end of the month.

Becauſe moſt women then are phlegmatic, and the laſt quarter is phlegm: or elſe it proceeds from defect, and therefore cold works, then do multiply the matter, and ſo multiplied, is then expelled.

How happens pain and grief at that time.

Becauſe it is like the pain of the ſtranguary in making water drop by drop; for the ſtranguary, by reaſon of the drink undigeſted, offends the ſubtle paſſage of the urine, as happens after bathing; ſo the menſes, undigeſted and of an earthy ſubſtance, hurt the paſſage by which they go.

Why do women eaſily conceive after their menſes.

Becauſe the womb being cleanſed, they are better prepared for conception.

Why do women look pale when they are upon them.

Becauſe then the heat goes from the outward part of the body to the inward to help nature and expel their terms, which deprivation of heat doth cauſe a paleneſs in the face. Or elſe it is, becauſe that flux is cauſed of raw humors, which when they run, make the face colorleſs.

Why do they at that time abhor their meat.

Becauſe nature labors more to expel their terms, than to digeſt, and therefore, if they ſhould eat it would remain raw on their ſtomach.

Why are ſome women barren and cannot conceive.

1. It proceeds ſometimes of the man, who being of a cold nature his ſeed is unfit for generation; 2. Becauſe it is wateriſh, and ſo doth not ſtay in the womb: 3. The ſeed of both is not proportionate: as if the man be melancholy and the woman ſanguine, or the man choleric and the woman phlegmatic; for it is evident in philoſophy, that the agent and the patient ought to have the ſame proportion, elſe the action is hindered.

Why do fat women ſeldom conceive with child.

Becauſe they have a ſlippery womb, and the ſeed will not ſtay in, or elſe becauſe the mouth of the matrix is very ſtrait, and the ſeed cannot enter in, or if it do, it is ſo very ſlowly, that it grows cold in the mean time, ſo is unfit for generation, and is diſſolved into any fleſhy ſubſtance.

Why do thoſe of very hot conſtitution ſeldom conceive.

Becauſe the ſeed in them is extinguiſhed or put out as water caſt into fire.

Why are whores never with child.

By reaſon of divers ſeeds, which corrupt and ſpoil the inſtrument of conception, for it makes them ſo ſlippery that they cannot retain the ſeed. Or elſe it is becauſe one man's ſeed deſtroys another, ſo neither is good for generation. Albertus ſays, the beſt thing to help conception is to take the matrix of a hare beat to powder in drink.

Why have ſome women long and ſlender children, and others thick and ſhort.

Becauſe, as Galen and Averrois ſay, the child is formed according to the dimenſions of the womb: wherefore, becauſe ſome women have a long and narrow womb: Their children are long and ſlender, others, on the contrary, ſhort and large, therefore their children be ſhort and thick.

Why doth a woman conceive twins.

According to Galen, becauſe there are ſeveral cells or receptacles of the womb, wherefore they may naturally have ſo many children at once, as there falls ſeed in thoſe cells: There are 3 in the right ſide and 3 in the left: in the right ſide boys are engendered, in the left girls: and in the midſt of theſe cells or chambers, there is another, where the ancients aſſert hermaphrodites to be engendered If a woman ſhould have more than 7 children at once, it would rather be miraculous than natural.

Why are twins not ſo ſtrong as other men.

By reaſon the ſeed which ſhould have been for one is divided into two, and therefore they are weakly, and in truth do not often live long.

Of Hermaphrodites.

How are Hermaphrodites begotten.

There are ſeven cells in the womb, three on the right ſide, and three on the left, and a ſeventh in the centre, into which the ſeed falls, an hermaphrodite is ſaid to be begotten in this manner: Nature tends always to that which is beſt, therefore ſhe does always intend to beget a male: which male is ſometimes begotten in all its principal parts, and yet, through the evil diſpoſition of the womb and object, and inequality of the ſeeds, when nature cannot perfect the male, ſhe brings forth the female too: and therefore an hermaphrodite is impotent in the privy parts of man as appears by experience.

Why doth not nature diſpoſe in him two ſecret parts of a man or two of a woman? But one of a man and one of a woman!

Becauſe nature would make one in vain: But philoſophers ſay that God made nothing in vain.

Is an hermaphrodite accounted a man or woman.

It is to be considered in which member he is fittest for the act of copulation: If fittest in the woman's then it is a woman: If in the man's he is a man.

Should he be baptized in the name of a man or a woman.

In the name of a man, because names are given *ad placitum*, and therefore he should be baptized according to the worthiest name.

Should he stand in judgment in the name of a man or a woman.

According to the law he should first swear before he be admitted to judgment, which secret part he can use, and so is to be admitted according to the use and power of that part.

Of Monsters.

Doth nature make any monsters.

She doth; for if she did not, we would soon be deprived of her end. For of things possible she doth always propose to bring forth that which is most perfect: but in the end, through the evil disposition of the matter, and influence of some especial constellation, not being able to bring forth that which she intended, she brings forth that which she can. In Albertus' time a cow brought forth a calf half a man, the countrymen suspecting a shepherd, would have burnt him with the cow, but Albertus being skillful in astronomy, said that this did proceed from a special constellation, and delivered the shepherd from their hands.

Be they one or two?

Aristotle saith you must look into the heart, and if there be two hearts there be two men.

Why is a man born sometimes with a great head, and six fingers on one hand, or with four?

Aristotle saith it proceeds of superfluity and abundance of matter: when there is too much matter, then he is born with a great head, or six fingers; but if there be want of matter, then there is some part wanting or less than it ought to be.

Of Infants.

Why are some children altogether like the father, some like the mother, some like both, and some like neither?

If the seed of the father do wholly overcome that of the mother, the child doth wholly resemble the father; but if the mother's predominate, then it is like the mother: but if he be not like either, that doth happen for many causes sometimes through the four qualities, sometimes thro' the influence of some heavenly constellation. Albertus saith, that there was on a time a good constellation for begetting of hogs, and a child was then begotten and brought forth, which had a face like a hog; According to this divers sorts of monsters are brought forth.

Why are children oftener like the father than the mother?

That proceeds of imagination of the mother in the act of copulation, and therefore the children get the disposition of the father. This appears from an ethiopian queen, who brought forth a white child, because her imagination was upon a white color: and is seen in Jacob's skill in casting rods of divers colors into the water when his sheep went to ram.

Why do children sometimes more resemble their grandfathers and great grandfathers, than their parents?

The virtue and force of the grandfather is grafted in the heart of the begetter, and it may be said that sometimes it doth pro-

ceed of the ſimilitude of the nutriment, and then the child is formed by the ſimilitude of the grandfather.

Why do children, according to the courſe of nature, come out of the mother's womb in the ninth month ?

Becauſe the child is then fully perfect, or elſe becauſe ſome benign planet doth reign, Jupiter, who is a friend of nature ; for, according to the aſtronomers, he is hot, moiſt, and therefore doth temper the malice and naughtineſs of Saturn, who is cold and dry ; therefore for the moſt part, children born in the ninth month, and are healthful.

Why do children born in the 8th month, for the moſt part, die quickly : and why are they called the children of the moon ?

Becauſe the moon is a cold planet, which has dominion over the child, and therefore doth bind it with its coldneſs which is the cauſe of its death.

Why doth a child cry as it is born ?

1ſt, Becauſe of the ſudden change from heat to cold, which cold doth hurt its tenderneſs. 2dly, Becauſe the child's ſoft and tender body is wringed and put together, coming out of the narrow and ſtrait paſſage of the matrix ; and eſpecially the brain being moiſt and the head preſſed and wringed together, is the cauſe that ſome humors do diſtill by the eyes, which are the cauſe of tears and weeping. 3dly, Divines ſay it is for the tranſgreſſion of our firſt father and original ſin.

Why doth a child put his finger into his mouth when he cometh firſt into the world ?

Becauſe that coming out of the womb, he cometh out of a hot bath, and entering into the cold, he puts his fingers into his mouth for want of heat.

How doth a child come into the world out of the womb ?

He cometh forth with the head forward ; for, if he ſhould come with the thighs or arms, he would kill himſelf and the mother.

Of the YOUNG ONE in the womb.

How is the young one engendered in the womb ?

The firſt ſix days the ſeed hath the color of milk, but in the ſix days following a red color, which is near unto the diſpoſition of fleſh, and then is changed into a thick ſubſtance of blood, but in twelve days following, this ſubſtance is made ſo thick and ſound, that it is able to receive ſhape and form, becauſe a fluid or running ſubſtance ſteepeth on till its birth ; and it is governed every month by the planets.

Doth the child in the womb void excrements or make water ?

No : and the reaſon is becauſe he hath the firſt digeſtion which is in the ſtomach ; he receives no food by the mouth, but it comes to him at the navel, he therefore makes no urine, but ſweats, which at beſt is but little, and is received in a ſkin in the matrix, and at his birth is caſt out.

Why doth the child come eaſily out of the matrix, after ſeven, eight or nine months ?

Becauſe, ſaith Galen, when the fruit is ripe, then the ligaments are broken, and ſo it falls out.

Of ABORTION and untimely BIRTH.

Why do women that eat unwholeſome meats eaſily miſcarry?

Becauſe it breeds putrefied ſeed in them, which the mind abhorring doth caſt out of the womb, as unfit for the moſt noble ſhape which is adapted to receive the ſoul

Why doth wreſtling or leaping cauſe the caſting of the child as ſome ſubtle women uſed to do on purpoſe?

Becauſe it looſes the ligaments which ſhould hold the child.

Why doth thunder cauſe miſcarriage.

The vapor is burning, and doth eaſily hurt the tender ſubſtance of the child, entering in at the pores of the matrix. Albertus ſays, if the child be near delivery, lightning and thunder will kill it.

Why doth thunder and lightning rather cauſe young women than old to miſcarry?

Becauſe the bodies of young women are fuller of pores, and more ſlender, and therefore the lightning ſooner enters into their body; but old ones have a thick ſkin, well compacted, therefore the vapors cannot enter.

Why doth much joy cauſe women to miſcarry?

Becauſe in a time of joy a woman is deſtitute of heat, and ſo the miſcarriage doth follow.

Why do women eaſily miſcarry when they are firſt with child, viz. the firſt, ſecond, or third month?

Apples and pears eaſily fall, at firſt becauſe the knots and ligaments are weak, ſo it is of a child in the womb.

Why is it more hard to miſcarry in the fourth, fifth, or ſixth month?

Becauſe then the ligaments are ſtronger and well fortified.

Of divers MATTERS.

Why have ſome women greater grief than others in child birth?

For three reaſons, 1ſt. For the largeneſs of the child. 2dly, The midwife being unſkilful, and thirdly, becauſe the child is dead. For the contrary cauſes, ſome have leſs pain.

Why hath not a man a tail like a beaſt?

Becauſe a man is a noble creature, whoſe property is to ſit: to a beaſt cannot, that hath a tail.

Do thoſe who keep hot houſes expel the heat of a furnace better with cold water than hot?

Yes: becauſe they are of contrary qualities, which work ſtrongly one againſt the other, and therefore, the heat is eaſily expelled from the ſtone.

Why does hot water freeze ſooner than cold?

Becauſe hot water is thinner, and gives better entrance to the froſt.

For what reaſon is every living thing dull after copulation?

Becauſe the act is filthy and unclean, and ſo every living creature abhors it: When men do think upon it they are aſhamed and ſad.

Cannot drunken men judge of taſtes as well as ſober men?

No: becauſe the tongue being full of pores and ſpungy, it receives great moiſture in it, and more in drunken men than in ſober; therefore the tongue, by often drinking, is full of bad humors and ſo the faculty of the taſte is out of order; there-

fore though the thickening of the mean, *i. e.* taſte, drink taken of drunkards is not preſently felt, for, to due feeling there is requiſite to have a due proportion of the mean. And by this is alſo underſtood why drunk perſons have not a perfect ſpeech.

Why have melancholy beaſts long ears; and why are not thoſe men wiſe for the moſt part that have long ears, but thoſe otherwiſe that have ſhort ones?

The ears proceed from a cold and dry ſubſtance called a griſtle, which is apt to become a bone; and becauſe melancholy beaſts do abound with this kind of ſubſtance, they have long ears.

How comes the other to be half witted?

Becauſe the minds and ſouls follow the bodies, for if the ſenſes of the body be ſubtle, the ſoul exerciſes ſubtle operation, as well active as ſpeculative; and the contrary is in a groſe body.

How is the intellectual ſoul joined to a child in the womb of the mother; and how does the man who begets it, make the matter apt and fit to receive the ſoul?

Divines ſay, that into a ſubſtance ſufficiently diſpoſed and made fit, God doth infuſe the intellectual ſoul; and St. Auguſtine ſays the like: the ſoul in creating is infuſed, and in infuſing is created.

Why do hares ſleep with their eyes open?

Their eyes ſtand out and their eyelids are ſhort, therefore never quite ſhut. Beſides they are timorous; and, as a ſafeguard to themſelves, ſleep with their eyes open.

Why do not crows feed their young till they are nine days old?

Becauſe ſeeing them of another color they think them of another kind; meanwhile God feeds them with heavenly dew, as the Pſalmiſt ſaith, "He giveth beaſts their food, and young crows will call upon him."

Why are ſheep and pigeons mild creatures?

Becauſe they want galls, which ſtir anger.

Why have birds their ſtones inward?

Becauſe if they were outward, they would hinder their flying and lightneſs.

How comes it that birds do not piſs?

Becauſe that ſuperfluity which would be converted into urine is turned into feathers, for there is much moiſture in the feathers. Another reaſon is, they are in continual motion, therefore moiſture in them is dried up by air or wind.

How come long eggs to be a ſign and cauſe of the male, and flat ſhort eggs of the female?

Hippocrates ſays, it is the property of heat to aſcend from the centre to the circumference of cold; therefore long eggs have great heat and therefore paſs into the ſubſtance of the male for, in every kind the male is hotter than the female, as philoſophers ſay. If the eggs be ſhort and flat, it is a ſign the heat is ſmall and undiſperſed, and goeth into the ſubſtance of the female.

Why do we hear better by night than by day?

Becauſe there is a greater quietneſs in the night than in the day, for the ſun doth not exhale the vapors by night, as it doth in the day, therefore, the mean is more fit than ready, and the

mean being fit, the motion is better done by it, which, is ſaid to be done by a ſound. Another reaſon is, there are more motions and ſounds in the air, in the day than in the night, which hinder one another: In the night there is ſilence, which is oppoſite to ſound, and oppoſites put one againſt the other ſhew better.

For what reaſon doth a man laugh ſooner when touched in the armpits than in other parts of the body?

Becauſe there is in that place a meeting of many ſinews and the mean we touch (which is the fleſh) is more ſubtle, than in other parts, and therefore a better feeling. When a man is moderately and gently touched there, the ſpirits are diſperſed, run into the face, and thence cauſes laughter; but if touched too roughly, then there is not that delight.

How comes burnt wood to be black, and a bone burnt to be of a white ſubſtance?

Becauſe the wood, before it was burnt was moiſt, and the heat is not able to conſume all the moiſture of the wood, and therefore there remaineth ſome after the burning, which is converted into black ſubſtance, becauſe the humidity of the wood was ſlimy and could not altogether be conſumed by the fire. But a bone is cold and dry of its own nature, having but ſmall moiſture in it, which the burning doth wholly conſume, and ſo the moiſture being conſumed, the body waxeth white.

Why do ſome women love white men and ſome black?

There are two anſwers. Some women have a weak ſight, and ſuch delight in black, becauſe white doth hurt the ſight more than black. The ſecond reaſon is, becauſe like delights in like: ſome women are of a hot nature, and ſuch are delighted with black becauſe blackneſs doth follow heat, and others are of a cold nature, and theſe are delighted with white, becauſe cold is the mother of whiteneſs.

Why do men willingly ſleep after labor?

Becauſe that though continually moving the heat is diſperſed to the external parts of the body, which after labor, is gathered together to the internal parts, to help the digeſtion: and thence vapors do ariſe from the heart to the brain, which ſtop the paſſages by which the natural heat ſhould be diſperſed to the external parts; and then the external parts being cold and thick, by reaſon of the coldneſs of the brain, ſleep is procured. And by this it appeareth, that ſuch as eat and drink much do ſleep much and long, becauſe great ſtore of humors and vapors are bred in ſuch, which cannot be digeſted by the natural heat.

Why are ſuch as ſleep much evil diſpoſed and ill colored?

Becauſe that in ſleeping much moiſture is gathered together, which cannot be conſumed, and is expelled in walking, and ſo it doth covet to go out through the ſuperficial part of the body, and eſpecially it reſorts to the face, and is the cauſe of a bad color, as appeareth in ſuch as be phlegmatic, who deſire more ſleep than others.

Why doth it appear unto ſome in their ſleep that they eat and drink ſweet things?

Becauſe the phlegm drawn up by the jaws doth diſtil and drop to the throat, and this phlegm is after a ſort ſweet, and therefore that ſeemeth ſo to them.

Why do ſome dream in their ſleep that they are in the water and drowned and ſome that they are in the water and not drowned ?

The reaſon is becauſe the phlegmatic ſubſtance doth run to the high parts of the body, and then they think they are in the water and drowned ; and when that ſubſtance draweth unto the internal parts, then they think they eſcape. Another reaſon may be, overcome repletion and drunkenneſs : and therefore when a man is overcome, filled with meat, the fumes and vapors aſcend and gather together, and therefore they think that they are drowned and ſtrangled : but if they cannot aſcend ſo high then they ſeem to eſcape.

May a man procure a dream by an external cauſe ?

Ariſtotle holdeth that it may be done, if a man do ſpeak ſoftly at a man's ear, and awake him, then of this ſtirring of the ſpirits there are thunderings and buzzings in the head, and ſo they dream of that. And ſo ſome men have dreams by divine revelation, when it pleaſed God to ſend any.

How many humors are there in a man's body ?

Four : whereof every one hath its proper place in man's body.

The firſt is choler, which phyſicians call *flava bilis*, and is placed in the liver. The 2d is melancholy, called *atra bilis* whoſe ſeat is in the ſpleen. The 3d is phlegm, whoſe place is in the head. The 4th is blood, whoſe place is in the heart

What condition and quality hath a man of a ſanguine complexion ?

He is fair and beautiful : he hath his hair for the moſt part ſmooth ; he is bold, he retaineth that which he hath conceived ; he is ſhamefaced, given to muſic, a lover of ſciences, liberal courteous, and deſires no revenge.

What properties do follow a phlegmatic complexion ?

They are dull of wit, their hair never curls, they are ſeldom very thirſty, they are much given to ſleep, they dream of things belonging to water, they are fearful covetous, given to heap up riches, are weak in the act of venery

What properties do follow the choleric man ?

He is furious and angry, quarrelſome, given to war, pale colored and unquiet ; drinks much, ſleeps little, and deſires much company of the women.

What properties do follow the melancholy man ?

He is unquiet, brown in complexion, his veins hidden, he eateth little, and digeſteth leſs ; when he dreameth, it is of dark confuſed things ; he is ſad, fearful exceeding covetous and incontinent, unleſs he bridle his affection.

What dreams do follow theſe complexions ?

Pleaſant merry dreams do follow the ſanguine complexion fearful dreams the melancholy ; the choleric dream of children fighting, and fire ; and the phlegmatic dream of water. And this is the reaſon why a man's complexion is ſaid to be known by his dreams.

What is the reaſon that if you cover an egg over with ſalt and let it lie in it a few days all the meat within is conſumed ?

The great dryneſs of the ſalt doth conſume the ſubſtance of

the egg ; but in ſand ſome ſay they may be kept as long as you pleaſe, as the mariners practiſe.

Why is the melancholy complexion the worſt of all ?

Becauſe it is the dregs of the blood, which is an enemy to mirth, and the farthereſt from the beginning of a man's life, and bringing old age and death, becauſe it is cold and dry.

Why is the phlegmatic for the moſt part dull of wit ?

Becauſe the vivacity of wit proceedeth of heat, ſo of cold, the contrary, which they are ſubject unto.

Wherefore doth it proceed that ſome men die with extreme joy, and ſome with extreme grief ?

Over great joy doth overmuch heat the internal parts of the body, and overmuch heat doth drown and ſuffocate the body, in which failing a man dieth.

Why hath a man ſo much hair on his head ?

The hair of the head proceedeth of the vapors which ariſe from the ſtomach, and aſcend to the head, and alſo of the ſuperfluities which are in the brain ; and thoſe two paſſing through the pores of the head, are converted into hair, by reaſon of the heat and dryneſs of the head. And becauſe man's body is full of humors and hath more brains than other creatures, and alſo more ſuperfluities in the brains, which the brain expelleth, it followeth that he hath more hair than other living creatures.

How many ways is the brain purged, and other hidden places of the body ?

Four : the watery and groſs humors are purged by the eyes, melancholy by the ears, choler by the noſe and phlegm by the hair.

What is the reaſon that ſuch as are very fat in their youth, are in danger to die on a ſudden ?

Such have very ſmall and cloſe veins, by reaſon of their fatneſs ſo that the air and the breath can hardly have free courſe in them ; and thereupon the natural heat wanting ſome refreſhment of the air, is put out, and as it were quenched.

Why do garlics and onions grow after they are gathered ?

They grow in the great humidity which is in them.

Why do men feel cold ſooner than women ?

Becauſe that men being hotter than women, have their pores more open, and therefore the cold doth ſooner enter into them than women.

Why are not old men ſo ſubject to the plague, as young men and children ?

They are cold, and therefore the pores are ſhut up, and not ſo open as in youth ; and therefore the infecting air doth not penetrate ſo ſoon as when they are open, as in youth, by reaſon of heat.

Why do we caſt water in a man's face when he ſwooneth ?

Becauſe that through the coldneſs of water, the heat may run to the heart, and ſo give ſtrength.

Why are thoſe waters beſt, and moſt delicate which run towards the ſun riſing ?

Becauſe they are ſooneſt ſtricken with the ſun beams, and made pure and ſubtle, becauſe the ſun hath them long under him and by that means takes off the coldneſs and groſs vapors which they gather from the ground they run through.

Why have ſome women ſuch weak and ſmall voices ?

Becauſe their inſtruments and organs of ſpeaking, by reaſon they are cold, are ſmall and narrow ; and therefore receiving but little air cauſeth the voice to be ſmall and effeminate.

Whereof doth it proceed that want of ſleep doth weaken the brain, and the body ?

Much watching doth engender choler, which being hot, doth dry up and leſſen the humors which conſerve the brain, head and other parts of the body

Whereof doth it proceed that vinegar doth ſtaunch blood ?

It proceedeth of its cold virtue, for all cold is naturally binding, and vinegar being cold hath the like property.

Why is the ſea water ſalter in ſummer than in winter ?

It proceedeth from the heat of the ſun, ſeeing by experience that a ſalt thing being heated, becometh more ſalt.

Why do men live longer in hot regions than cold ?

Becauſe they may be more dry, and by that means the natural heat is better conſerved in them than in cold countries, becauſe the cold doth extinguiſh the heat.

Why is well water ſeldom or never good ?

All water which ſtandeth ſtill in the ſpring, and is never heated by the ſun beams is very heavy, and hath much earthy matter in it ; and therefore, wanting the heat of the ſun, is naught.

Why do we ſleep better and more at eaſe on the right ſide than on the left ?

Becauſe, when we lie on the left, the lungs do lie open and cover the heart, which is under that ſide under the pap. Now the heart, the fountain of life, being thus occupied and hindered with the lungs, cannot exerciſe its own proper operation, as being overmuch heated with the lungs lying on it, and therefore wanting the refreſhment of the air, which the lungs do give it like the blowing a pair of bellows, is choaked and ſuffocated ; but by lying on the right ſide theſe inconveniences are avoided.

Whereof doth proceed that holding of the breath doth cauſe yuxing to ceaſe ?

Becauſe that holding the breath doth heat the internal parts of the body. And this heat chaſeth away the yux, being nothing elſe but cold air within the body

What is the reaſon that old men ſneeze with difficulty ?

Becauſe that through their coldneſs their arteries are very narrow and cloſe, and therefore the heat is not of force to expel the cold ; for I think ſneezing is like the combat in the air made by thunder, which is cauſed by heat and cold.

Why doth a drunken man think that all things about him do turn round ?

Becauſe the ſpirits which ſerve the ſight are mingled with vapors, fumes and wine ; and then the overmuch heat cauſeth the eye to be in a continual moving ; and the eye being round cauſeth all things about it to ſeem to go round.

Wherefore doth it proceed, that bread which is made with ſalt is lighter than that which is made without it, conſidering ſalt very heavy of itſelf ?

Although bread is heavy of itſelf, yet the ſalt dries it, and makes it light by reaſon of the heat which it hath, which heat

doth dry, and the more heat there is in it the better the bread is, the lighter and more wholesome for the body.

Why is not new bread good for the stomach?

Because it is full of moistness, and thick and hot vapors, which do corrupt the blood, and hot bread is blacker than cold, because heat is the mother of blackness, and because the vapors are not gone out of it.

Why does lettuce make a man sleep?

Because they engender gross vapors.

Why do the dregs of wine and oil go to the bottom, and those of honey swim a top?

Because the dregs of wine and oil are earthy and not purged before, and therefore being of the nature of earth do go to the bottom; but honey is a liquor, which cometh from the stomach and belly of the bee, and is there in some sort purified and made subtle; and by that means, that which remains is light and hot, and therefore goes upward.

Why do cats' and wolves' eyes shine at night and not in day?

The eyes of those beasts are by nature more christaline than the eyes of other beasts, and therefore do shine as they do; but the brightness of the sun doth hinder them to be seen in the day time.

What is the reason that some men when they see others dance, do the like with their hands and feet, or by some other gesture of the body?

The answer is, because the sight having carried and represented unto the mind that action, and judging the same to be pleasant and delightful, and therefore (desiring it) the imagination draweth the likeness of it in conceit, and stirs up the body by the gestures.

Why doth much sleep cause some to grow fat and some lean?

Those who are of ill complexion, when they sleep, do consume and digest the superfluities of that they have eaten, and therefore become fat. But such as are of good complexion when they sleep are much more cold, and so digest less.

How and for what cause do we suffer hunger better than thirst?

When the stomach hath nothing to consume, it consumeth the phlegm and humors which it findeth more ready and most at hand: and therefore we suffer hunger better than thirst, because the heat hath nothing to refresh it withal.

Why doth the hair fall after a great sickness?

Where the sickness is long, as in agues, the humors of the head are dried up through overmuch heat, and therefore wanting nourishment they fall.

Why does the hair of the eyebrows grow long in old men?

Because that through their age the bones of the eyelids are thin, by reason of the want of heat, and therefore the hair doth grow there, by reason of the rheums of the eyes. The like doth happen in such as imagine much, because that with their heat they draw up many humors to the fore part of the head, where, the imagination is placed.

Whereof proceedeth gaping?

Of gross vapors which occupy the vital spirits of the head, and the senses are cold, making them ready to sleep.

Why do ſome flowers open with the ſun riſing, and ſome with the ſun ſetting ?

Cold doth ſhut and cloſe as hath been ſaid, but the heat of the ſun doth open and enlarge : ſome do compare the ſun to the ſoul of the body ; for, as the ſoul giveth life, and when it departeth, death followeth ; ſo the ſun doth give life, and vivifies all things ; the cold bringeth death, withering and decaying of all things.

Why doth grief cauſe men to grow old and grey ?

Age is nothing elſe but a dryneſs, and want of humors in the body ; grief then cauſeth alteration and alteration heat, and heat dryneſs ; age followeth immediately, and greyneſs.

Why are gelded beaſts weaker than ſuch as are not gelded ?

Becauſe they have leſſer heat and by that means leſſer force and ſtrength.

M. ANTON. ZIMARAS SANCTIPERTIAS's PROBLEMS.

Why is it eſteemed in the judgment of the moſt wiſe the hardeſt thing to know a man's ſelf ?

It is becauſe nothing can be known ; its form and perfection cannot be found ; to know the form and perfection of a man's ſelf, as it cometh unto the philoſopher, is a matter hard enough, and a man, by the authority of Plato, either is nothing, or if he be any thing, he is nothing but his ſoul Or, is it becauſe it cannot be done by a reflected action, and to reflect and look unto himſelf as a token that he is ſeparated by the fleſh ; for he who would know himſelf ſhould be drawn from ſenſible affections ; and how hard this is, no man is ignorant of ? Or, is it becauſe a man liveth by underſtanding ; but the underſtanding, a man cannot conceive of himſelf, but after the underſtanding of ſenſes, which is very hard.

Why was Socrates eſteemed the wiſeſt of all Greece by Apollo, ſeeing that, by the opinion of Ariſtotle, he was converſant and buſied only about morality, and nothing about nature ?

Whether it is becauſe it is more expedient for the commodity and uſe of men to live well and contemplate ; or becauſe it ſeemeth to Plato that he was uſually profeſſed of him every where, I know one thing, that I know nothing.

Why do men eſpecially ſtrive and contend in things of wit ?

It is becauſe they think that other things which are called goods are the power of another ; as the gifts of the body are nature's and external, and worldly goods are ſubject unto the rule of fortune whereof it cometh to paſs, that every man can eaſily ſuffer himſelf to be overcome in ſuch things, as things not happening through his fault or occaſion, but they think wit to be in their own power. Or, it is becauſe they think that the goods of the mind do excel all other goods, and therefore do think it a thing moſt natural to contend for that which is moſt excellent. Or, it is becauſe it is a common diſeaſe of all men, as it ſeemeth unto a certain wiſe man, that every man doth think himſelf more learned than he is, and therefore doth deſire to perform that which he believeth, without ſtudy and labor.

Why do men ſay that philoſophy is naked ?

It is becauſe truth is naked, and that there needs no color of words when we handle a matter of truth; for, it belongeth to ſophiers to diſpute of terms when the ſincere truth is ſought. Or, it is becauſe they do not play the philoſopher well, who ſeek philoſophy for gain and ambition and not for herſelf. Or, it is becauſe he ſhould be void from all worldly affections who deſires to endear himſelf in the ſtudy of philoſophy; for Ariſtotle doth ſay, the ſoul is made wiſe by reſt and quietneſs. And it were eaſy for philoſophers to become rich, if they would, as it appeareth by the example of Thales

Why do men deſire to be had in memory after their death, and therefore ſome make pyramids, ſtatues, images, and divers other tokens and monuments which they build and leave behind them?

It is becauſe all things, as ſeems unto Ariſtotle, do deſire to participate of ſome perpetuity and divine being, as much as they can; and therefore, if they cannot remain in nature and being, yet they endeavor at leaſt to continue in the opinion and conceit of men. Or elſe cuſtom hath brought it in ſo, to ſtir up ſuch as comes after, to the end they ſhould not degenerate from their parents.

What's the cauſe why men's deſires grow without meaſure about fortunes' goods?

It is becauſe natural deſires, as Seneca ſaith, have an end, and ſuch deſires, as proceed of falſe opinion have no where to end.

Why do poets always aſſign and appoint ſome wiſe men to be familiar with princes: as, Homer doth Neſtor with Agamemnon; Euripides, Tireſius with Creon; Heſiodus, Promotheus, with Jupiter: and, Maro, Achates and Æneas?

It is becauſe that by the law of nature, as Plato doth ſay, wiſdom and power do direct our actions to one end, and to effect the ſame thing, love it and ſeek it

Why doth Homer when he makes mention of Ambaſſadors, talk always of the embaſſy of a commander in bare words?

It is becauſe it is the duty of ambaſſadors, to declare the bare will of the commander, and put his ſentence in execution; and therefore, it is certain, he ſhould add nothing; or elſe, it is becauſe the commandment of him who doth rule, that is, of a wiſe man, is put into good order and is preſumed to be moſt perfect. And therefore there ſhould be nothing changed; but his decrees and conſtitutions are to be judged abſolute and perfect.

Why does Ariſtotle uſe exceeding brevity in moſt hard matters?

Whether becauſe it is the cuſtom of wiſe men to load their words with ſentences, or elſe to the end that he would be obſcure, to fear and keep off rude wits from reading of his works, as it ſeemeth in the expoſitors: or, whether it is becauſe that in a hard matter, and in a matter of truth, many words are ſuſpected, becauſe that truth doth conſiſt in few words; or it is becauſe it ſeemeth to wiſe men, in many words there is error often committed

Why do famous men, in any ſcience, when they do err in any matters, err more dangerouſly than thoſe who are leſs famous?

It is becauſe that ſuch truſting to the heat of their own wit, are drawn far from their own ſenſes, and therefore, muſt needs be deceived. Avicen may ſerve for a proof of this, who, for all his fame in philoſophy, ſaid that a man might naturally be brought forth of the earth. And that great famous Averrois, thought that a maid might conceive a child in a bath without the knowledge of a man.

Out of ARISTOTLE.

Why is a man, being endued with reaſon, the moſt unjuſt of all living creatures?

It is becauſe men only are deſirous of honor, ſo it comes to paſs that every one covets to ſeem good and yet naturally ſhuns labor, though he attains no virtue by it; or elſe, it is becauſe the nature of a ſophiſter is rather to ſeem, than be and not ſeem; but very few do attain to true virtue.

Why do ſome in their youth beget girls, and in their middle age, and when old beget boys?

It is becauſe the ſeed waxeth cold in ſuch as uſe carnal copulation too often, are therefore in their middle age, when they grow tired, their ſeed is hotter, and ſo produceth males.

Why have children or boys pleaſure in the act of venery, ſeeing they do not caſt forth ſeed?

It is as the philoſopher ſaith, becauſe there are certain ticklings in the letting out the ſpirit or breath, as it is in ſuch as are of age by caſting forth ſeed.

Why have thoſe the leaſt pleaſure who uſe the act of copulation often?

By often uſing carnal copulation the ſpirit and ſeed doth increaſe and wax cold, therefore not ſo itching or tickling, which is of delight:

Why doth immoderate copulation do more hurt than immoderate letting of blood?

It is becauſe the ſeed is fuller of ſpirit and nutriment, better diſpoſed and prepared for the nurture of the body than the blood; for, ſays Galen, the ſeed is the cauſe of the ſubſtantial parts of the body, and of it the body grows and is nouriſhed. And he who is hungry is hurt more by taking away bread than flour, ſo the body is more weakened by taking away ſeed than by evacuating blood.

What is the reaſon that thoſe who have a very long yard cannot get children?

Becauſe the ſeed in going a long diſtance the ſpirit doth breathe out, and therefore is cold and unfit for generation.

Why do ſuch as are corpulent caſt forth little ſeed in the act of copulation, and are often barren?

It is becauſe the ſeed of ſuch goes to nouriſhing the body; for the ſame reaſon corpulent women have but few menſes.

How comes women prone to venery in the ſummer time, and men in winter?

It is becauſe at that time his teſticles hang down and are feebler than in winter: or elſe, becauſe hot natures become lively; for a man is hot and dry, women cold and moiſt, and therefore in ſummer the ſtrength of men decays, and that of women in-

creaſes, and ſhe grows livelier by the benefit of the contrary quality. And for the ſame reaſon, ſome beaſts of a cold nature lie in dens and holes, and, through the frigidity of the air, receive little or no nouriſhment, but revive again when heat comes.

How comes a man to be the proudeſt of all living creatures?

Whether it is by reaſon of his great knowledge, or that (as the philoſophers ſay) all intelligent beings having underſtanding, nothing remains that eſcapes man's knowledge in particular; or, it is becauſe he hath rule over all eartly creatures, and all things ſeem to be brought to his arbitrament: or, I ſhall anſwer, that the pride of man proceeds from his not knowing himſelf; for truly would remember that he is but duſt and aſhes, came naked into the world, was born to earn his bread by the ſweat of his brow, and after born to die, he would abhor pride.

How comes a man to underſtand one thing and do another?

It is becauſe there is in the ſame ſcience contrary things; or becauſe the office of the mind is to reach at many things, and the appetite tends to one only; and ſo a man chiefly lives by underſtanding and reaſon, but beaſts are governed by appetite, anger, and pleaſure.

How comes moſt women's wits unapt in good things, and prompt in naughty?

Becauſe of a privation which ſeems to be coupled and joined to her nature; for as a woman is a man's hurt, ſo the faculty of the privation is always to do miſchief.

Why do men ſay A woman's firſt counſel ſhould be coſen?

Becauſe (as we ſee in things that want reaſon) their actions and motions are guided to their proper ends by a ſuperior power; for I think that it is very true which is ſaid, that there is a Providence which puts into a diſhoneſt heart the deſire of honeſty, and in a poor man the deſire of wealth, as far as is ſufficient. So a woman's underſtanding, though ſhe knows not the reaſon of good and evil, is ſometimes directed by an infalliable truth to take ſome things in hand; but ſome things they undertake of themſelves are to be let alone, as weak and ſubject to many errors.

How comes it that women deſire to go fine, and deck themſelves, rather than men?

It is becauſe by nature they are imperfect, ſo they endeavor to ſupply their imperfections by art: or elſe it is becauſe they want the beauty of the mind, ſo they ſtudy to adorn their bodies.

How comes it that a tall man is ſeldom wiſe?

By reaſon the largeneſs of his body proceeds from exceſs of heat, and abundance of humidity. Some wiſe men think the perfection, accompliſhment, and goodneſs of the operation is perfected by dryneſs, which does always go and increaſe till it brings us to our end: for the conſtitution of the body originally ſprung from the laſt humidity, but the vehemence and exceſs of heat overflows the judgment, and hinders quietude.

Why is a number of princes and rulers naught?

It is becauſe if the government ſhould dwindle into tyranny, it is better to be under the yoke of one than many; or, becauſe a multitude of rulers ſeldom regard the good of the public. Hence it proceeds, that if once they diſagree, great evil is like to befal

the commonality; it is eaſier for one man to be well diſpoſed than many; in the government of many, there want not ſtrife, debate, and envy, for which reaſon let there be but one prince at a time.

Why have beaſts their hearts in the middle of their breaſt, and man inclining towards the left?

It is becauſe it would moderate the cold on that ſide! for Ariſtotle ſays, man hath only the left ſide cold. Or, it is as phyſicians ſay, becauſe it ſhould give place to the liver, which is on the right ſide.

Why doth a woman love that man beſt who had her maidenhead?

It is becauſe that as matter doth covet a form of perfection, ſo doth a woman the male: Or, it is by reaſon of ſhamefacedneſs, for, as Plato ſaith, ſhamefacedneſs doth follow love. Or, becauſe the beginning of great pleaſure doth bring a great alteration in the whole, whereby the powers of the mind are much delighted, and ſtick and reſt immoveable in the ſame. Heſiod adviſes to marry a maid.

How comes the night in full of the moon to be ſomewhat warm, ſince the moon is cold by night?

Whether it is becauſe the opinion of the peripateticks ought to be preferred, which ſays, every light heats in that reſpect it is reflected.

How is the night colder in autumn than in the ſpring?

Becauſe the air is very thin, and bodies that are rarified are very apt to receive heat, or cold, as is ſeen in water; for water heated doth ſooner freeze than cold.

How are the bodies ſooner hurt with cold in autumn than in ſpring?

Becauſe the bodies which are accuſtomed to cold, do in ſpring receive heat, and therefore the moving or mutation is natural, and not ſurprizing. But in autumn they haſten from heat to cold, not being accuſtomed. Galen ſays, nature doth not endure ſudden things.

Why are hairy people more luſtful than others?

Becauſe in them is ſuppoſed great ſtore of excrements and ſeed, as philoſophers aſſert

How comes it that men who have ſmall heads are naturally angry and teſty?

Becauſe when the head is little the brain is ſo of courſe, the heat of the heart cannot be moderated with the heat of the brain, as it ought to be, and anger proceeds of the boiling of the blood about the heart through ſome vexation.

How comes the fundament of a man to cloſe after he hath made water?

Becauſe the air runs preſently to fill that which was empty, and ſo the parts of the body are altered by the coldneſs of the air, which cauſes trembling

Why have ſome men died thro' grief, ſome thro' joy, but more thro' anger?

Becauſe joy cools the very inward guts; grief doth ſuffocate and choke the inward parts, and cool the outward; but anger

eats both, while heat remains: life and nature doth so too, because the soul is counted the life and natural heat.

Why doth the voice change in people when they begin to have seed?

Because that heat is in the beginning of veins and blood, as Aristotle saith against the physicians, and thereupon it raiseth that, because the change of the excrements of seed is made in the highest part of the body, the voice being above, makes it manifest: and thereupon it is the voices both of men and women do change when they begin to have seed.

How comes it that when a pot full of boiling liquor is seething yet the bottom is cold?

It is because the hot vapors ascend upward, and therefore when the uppermost water is hot, the bottom is cold, by reason of the coldness of the water adjoining to it.

Why is the grain which we find in the ants holes gnawed at one end?

They are directed by nature to gnaw and consume that end where the virtue of feeding is, for fear it sprout again, lest, by the sprouting and growing, they would be deprived of the nutriment belonging necessarily unto themselves.

Why do children love their mother more frequently than their father?

It is because they take great pains with them, or because of the great certainty which they have of themselves.

Why is not the father as well beloved of the son as the son is of the father?

It is because love does not go backward, but always forward: whence our desire neglects things past, and looks to things to come. Or, it is, because the father hath somewhat of his in the son, the son nothing of his in the father.

Why are ants more nimble when they are young than at any other time?

Whether it is because their nature and constitution being melancholy, it is requisite there should be a temperance with the recompence of contrary qualities; for melancholy by nature is cold and dry, but when they are young, they are hot and moist. This also we see in melancholy children; some children are of great wit, before it be looked for, insomuch that you may hope and promise any thing in time to come, whose wit nevertheless, in progress of time, doth decay and fade. Be therefore, saith the Greeks naught to the end that thou mayest live, for the nature of such is most short.

Why are there no asses in Pontus and Scythia?

It is because their nature is most impatient of cold, as philosophers do say.

Why are clergymen and women most covetous?

It is because the habit of virtue is bred of many actions, and therefore seeing that priests want wives and children, they are forced on ways to spend their goods, and yet are accustomed to take and receive, and so become covetous; for such as every man's actions are, such doth he become. The nature of women is imperfect, and therefore they think it impossible fully to sat-

isfy themselves; they gather together, and keep that by which they may help their need; and by industry and art they covet to obtain that which nature does not give them And for the same reason, I suppose, old men give themselves to covetousness; for being destitute of helps by age and nature, they gripe after the goods of fortune, that with them they may provide for themselves against all wants.

Why do wounds grieve less in war than out of war?

It is because the powers of the soul bend another way; for if our mind be strongly fixed on other matters, we do not see those things which are before our eyes: or, whether it is by reason of anger, which as wise men say, doth heat the internal and external part: and as Aristotle affirms, with the heat the soul works all things and therefore it happens that the angry man grows but slowly whole after his wound, and therefore also doth less grieve and heat.

Why do we wonder at the eclipse of the sun and moon, and not at the generation of plants and beasts?

Whether it is because our admiration ceaseth in things that are usual, and our minds neglect to search out the truth in such things: or, that which happens seldom, doth stir us up to wonder, and induceth the understanding to search out the cause.

How comes it that the headache, dullness of memory and an evil disposition, of imagination doth follow the long detaining of the seed?

It is because it doth hinder and make heavy the brain by excess of seed; or, because the seed long kept, gets some venomous quality, and therefore the fume and vapors of it doth hurt the head.

How is it that priests and monks fear and abhor death more than other men?

It is because they are by nature cold and melancholy; because they perceive themselves to perish utterly; for, when they are out of this world, they neither continue in their own nature nor in posterity.

Why though trees lose their leaves, beasts their hair, and birds their feathers, do they receive them again, when if a man becomes bald his hair groweth no more?

It is because the time of the year doth bring that change of bodies: so that in the first change there floweth an interchangable course one after another, and beasts receive their hair, birds their feathers, and trees their leaves: but baldness cometh to a man through age, and nature giveth no coming to age.

Why doth summer end all diseases?

If force and nature be strong, it shall find air most fit for resolution, digestion, and expulsion of superfluities; if weak, the heat doth overthrow it more. It doth loosen weak bodies, and therefore there cometh nothing but death unto the sick.

Why if a man put his hands into the water in summer, is he colder if the water be moved, than when it standeth still?

It is because that part of the water which toucheth his hand is hot by the heat of his hand: for every agent which doth communicate with the patient in the things whereon he worketh,

in doing ſo doth ſuffer again, and the water being moved, it is neceſſary that the parts of it which are rarified be ſcattered abroad, and others more cold ſucceed them.

Why do ſome who have an evil complexion and conſtiution of body live longer than ſome others who are of a ſanguine and better nature ?

Whether it is through bad government and order ; or becauſe there is ſome hidden cauſe in thoſe diſpoſitions ; for as Averrois ſaith, the number of elements is infinite in works of nature, the which none beſides the Author of nature doth underſtand.

What is the cauſe that the ſuffocation of the matrix, which happens to women through ſtrife and contention, is more dangerous than the detaining of flowers ?

Whether it is becauſe that by how much the more an excrement is perfect, ſo long as it doth continue in its natural diſpoſition, by ſo much the more it is worſe when it is removed from that, and drawn to the contrary quality, as is ſeen in vinegar, which is the ſharpeſt when it is made of the beſt wine : and ſo it happens, that the more men love one another, the more they hate when they fall to variance and diſcord.

Why doth the land, which ſtandeth ſtill, ſeem to move unto ſuch as ſail by ſea ?

It is becauſe the nutriment of the ſenſe of ſeeing is accidentally moved when the ſhip is moved, whereby the likeneſs and ſimilitude of things is perceived and received with the moving.

Why do we love our ſight above our ſenſes ?

It is becauſe it both ſhews us the difference of things, and becauſe its knowledge is more drawn from material ſubſtance : Or, it is becauſe the divine force of love is placed in that ſenſe, as Plato ſaith.

Why do we not judge a ſtaff to be broken in the water, ſeeing it doth ſo appear to our ſight ?

Becauſe we perceive by the ſenſe of feeling and touching, that the ſight doth err ; Or, becauſe we do not judge with the ſame power as we imagine with. Thus the ſun doth ſeem to be but a foot round ; and by a trick and moving of the finger, one finger doth ſeem two, yet we do not yield they be two.

Why do we put our hands over our eyes when we would ſee afar off ?

Becauſe the light ſhould not be diſperſed ; and ſo thoſe who have their eyes ſtanding out, cannot ſee far : and contrary, ſuch as have them hollow in their head can ſee far, becauſe the moving of the ſight is not ſcattered.

How do ſome people diſcern things near them, and not at a diſtance ?

It is through the weakneſs of the ſight, for in ſuch the power of ſeeing is very weak ; therefore they do not need a ſtrong moving, as it is alſo ſeen in ſuch as have their eyes ſtanding out who cannot ſee far.

Why do ſuch as would ſhoot aright, wink with one eye ?

Becauſe thereby the ſight is more ſtrengthened and united.

Why are ſuch as have been long in the dark, if on a ſudden they come into the light, half blind ?

Becauſe nature cannot endure thoſe ſudden mutations, or becauſe the ſpirit of the ſight is ſmall and weak, and therefore is glad of the light, and ſo diſſolves when they come into the light. Or, becauſe of the deſire of that light they wanted before, which when they behold too earneſtly, their ſight is weakened, as it happens in ſome who have a long time endured famine, and then eating greedily, take more than they can digeſt and ſo periſh.

Why can nothing be the cauſe of its own generation and corruption?

Becauſe the mover muſt be before the thing moved, and the engenderer before the things engendered: for it is impoſſible for any thing to be before itſelf.

How comes women's bodies to be looſer, ſofter, and their veins leſſer than men's: And why do they want hair?

By reaſon of their menſes: for with them their ſuperfluities, which would produce hair, go away; and where the fleſh is filled, conſequently their veins are more hid than mens'.

What is the reaſon that when we think of a horrible thing we are ſtricken with fear?

Becauſe the conceit, and thinking of things hath force and virtue: for Plato ſaith the reaſon of things hath ſome affinity with the things themſelves: for the immage and repreſentation of cold and heat, is ſuch as the nature of the things are: Or, becauſe when we comprehend any dreadful matter, the blood runs to the internal parts, and therefore the external parts are cold, and ſhake with fear.

Why doth a reddiſh root help digeſtion and yet itſelf remains undigeſted?

It is becauſe the ſubſtance conſiſteth of divers parts, for there are ſome thin parts in it which are fit to digeſt meat, the which being diſſolved, there doth remain ſome thick and cloſe ſubſtance in it, which the heat cannot digeſt.

Why do ſuch as cleave wood, cleave it eaſier in length than athwart?

Becauſe in wood there is a grain, if it be cut in length, whereby, in the very cutting, one part draweth another faſt by it.

What is the reaſon that if a ſpear be ſtricken on the end, the ſound cometh ſooner to one who ſtandeth near, than to him who ſtriketh?

Becauſe there is a certain long grain in wood directly forward filled with air: but croſs, or on the ſide, there is none; And therefore when a beam or ſpear is ſtricken on the end, the air which is hidden receiveth a ſound in the aforeſaid grain which ſerveth for the paſſage of the air, and therefore ſeeing the ſound cannot go eaſily out, it is carried unto the ear of him who is oppoſite to him, and thoſe paſſages do not go from ſide to ſide, and therefore a ſound cannot be diſtinctly heard.

Why are there not famous men in every faculty in our age?

Becauſe the nature of man decayeth in our age; and ſucceſſion being corrupted, the progeny of our age is worſe by birth; Or, it is becauſe ſuch are not eſteemed of princes; for, take away the reward due unto virtue, and no man will embrace it; or

it is ordained by nature, that men do always complain of the preſent time.

Why are flatterers in great credit with princes?

Becauſe they love themſelves too much; immoderate love of themſelves cauſeth them to admit flatterers, and to give them credit: Or, it is becauſe they want the light of reaſon? for among birds, ſome through the corruption of their nature, delight in ſtinking meat, and whom the day doth blind, the night doth lighten.

Why have philoſophers for the moſt part, in theſe days, evil conditions?

Becauſe they are eſteemed of princes: Or, becauſe of the philoſophy itſelf they are accuſed of crimes, and think therefore they are compelled to forſake virtue, and follow vice: Or elſe deceived through error, they think they have ſnatched to themſelves ſome of her rags; and therefore they are by us rather called ſophiſters than philoſophers, for certainly a philoſopher ſhould be of a ſtout courage in all reſpects, and in all fortunes: but as they would be honored of princes, and their deſire is not ruled by nature but by error, they are thruſt forward with ſtreams of falſe credulity.

Why do ſuch as are angry, wax pale in the beginning, and afterwards red?

It is through the deſire of revenge for that which grieveth, that the heat and blood are called unto the heart, and therefore, of neceſſity, the external parts are pale: when they are determined to put that in execution which they deſire, the heat and blood do run into the outward parts, and then they are greatly to be feared.

Why do ſerpents want a yard and ſtones?

Becauſe they want thighs, therefore they want a yard and ſtones and becauſe of the length of the body.

Why can ſerpents turn their heads backwards, and the reſt of the body ſtand ſtill?

Becauſe they are made of a winding compoſition, and have their joints flexible, and made of griſtle; and alſo, that they may avoid all thoſe things which hurt them, for having no feet, and being long in body, they cannot eaſily turn themſelves, whilſt they bow againſt thoſe things which are behind them. It were to no purpoſe to lift up their head if they could not exerciſe anger.

Why is a camelion changed into many colors?

The cauſe is to be referred unto the quality of the mind, for being the ſlendereſt of all four footed beaſts engendered of eggs, he is ſtark cold for want of blood, and through overmuch coldneſs he is of ſo many colors, for it is the property of fear to bind faſt, through want of blood and heat.

Why are the thighs and calves of the legs of man fleſhy, ſeeing the legs of beaſts are not ſo?

Becauſe men only go upright, and therefore nature hath given to the lower part corpulency, and hath taken it away from the upper: and therefore the buttocks, thighs, and calves of the legs are fleſhy.

Why are the ſenſible powers in the heart, yet if the hinder part of the brain be hurt the memory payeth for it; if the fore parts, the imagination: if the middle, the coagitative part?

Becauſe the brain is appointed by nature to cool the heat of the heart, wherefore, in divers of its parts, it ſerveth theſe powers and inſtruments of their heat; for every action of the ſoul doth not proceed from one meaſure of heat.

The PROBLEMS of ALAX. APHRODISEUS.

Why doth the ſun make men black: and make dirt white; and make wax ſoft, and dirt hard?

By reaſon of the diſpoſition of the ſubſtance that doth ſuffer. All humors phlegm excepted, when they are heated above meaſure, do ſeem black about the ſkin, but dirt being either full of ſaltpeter or ſalt liquor, when the ſun hath conſumed its dregs, and filth, doth become white again; when the ſun hath drawn and ſtirred up the humidity of the wax, it is ſoftened; but in dirt the ſun doth conſume the huminity which is very much, and ſo doth dry it and make it hard.

Why doth black choler, coming into the paps, cauſe a corroſion or gnawing; and in thoſe who are melancholy, it doth not, but flies into the brain?

Becauſe there are many great veins in the paps by reaſon of engendering milk, and therefore ſtore of that humor doth run thither. But in the brain becauſe it is above, and alſo becauſe it hath very ſmall veins, ſmall ſtore of choler doth aſcend, and which hath only power and force to prick and not to gnaw and eat. Moreover the brain is hard and moiſt, whereby it is, after a ſort contrary to the diſpoſition of black choler, which doth mortify it; that therefore which is properly called black choler doth breed an eating and gnawing canker in the paps. In the brain it doth breed a man fierce and melancholy, but that which is not properly black choler, but melancholy humor, cauſeth ſwelling only, which is like a cancer but doth not gnaw and eat, and doth alſo breed a quiet and peacable melancholy.

For what reaſon will not the water run out of the bottom of a watering pot, when we put our finger on the mouth of it, and the finger being taken away it runneth preſently?

Becauſe when the finger is taken away from the mouth of the pot, the air entering in doth thruſt down the water, which of its own nature doth go downward, and ſo goeth out at the bottom. And this is the reaſon of all mechanical engines and inſtruments made to go by air and water, as clocks, and hour glaſſes, made by water.

Why doth wine and water given out of ſeaſon, to the ſick of an ague, cauſe a diſtemper of the brain, when the water is cold and the wine is hot?

The wine being apt to aſcend, doth burn the brain at the time it is diſturbed and diſtempered with the ague. And we ſee alſo many who are in health, if they uſe much wine, to be ſcarce well in their wits. But water doth ſtop the paſſages of the body, by which the ſpirits are diſſolved, and ſo cauſes them to become thick and groſs, and more corrupt and putrified,

by the ague, becometh its nouriſhment; as we ſee in a ſmith's forge, where a little water doth kindle the fire, and make it burn fiercer.

Why have women, children, and gelded men ſhrill and loud voices?

Becauſe that through the abundance of humidity their artery is not ſtretched wide; and therefore, as a ſmall flute or pipe giveth a ſmall ſlender ſound, ſo does the aorty in them that is ſtraight and narrow; for it is the property of heat to make wide and looſen, but eunuchs and women are cold.

Why are children ſtricken with the planet in the ſummer time.

They are ſick of a weak and lingering ague, and their eyes ſink hollow in their head, and they become weak and feeble, and ſleep very little: and ſome of them have a flux, becauſe children are tender and ſo eaſily ſuffer: and having great ſtore of phlegm in the head, and that phlegm being overmuch heated, and alſo putrefied, doth inflame the ague, whereupon the griſtles of the brain are ſet on fire, and therefore they ſleep little; and that fire deſcending by the arteries of the heart, and ſetting on fire the lively ſpirits, doth kindle an ague: and ſeeing that much choler ariſes of an ague, thereby it falleth out, that the choler gnaweth and eateth the belly. It is plain, that the cauſe of that alteration is in the brain, becauſe that cooling medicines are applied unto the head, and ſuch as are good to quench that fire. Some of riper years are ſick of the ſame diſeaſe, *i. e.* ſuch as have phlegm and choler heaped up in their head, which putrefies by the very breathing thereof, and after a manner, the ſpirits are ſet on fire by a fiery air.

Why are round ulcers hard to be cured?

Becauſe they are bred of ſharp choler, which eats and gnaws, and becauſe it doth run, for which reaſon it requires drying medicines as phyſicians aſſert. Natural philoſophers ſay it comes to paſs becauſe there is beginning where the miſchievous impoſthume doth begin, for in a circle there is neither beginning nor end. When they are burned by phyſicians they do aſſume another kind of ſhape.

Why is honey ſweet to all men, and yet ſeemeth bitter to ſuch as have the jaundice?

Becauſe they have much bitter choler all over their bodies, but it abounds with the tongue, whence it happens when they eat honey the humors are ſtirred, and the taſte itſelf, when it hath found the bitterneſs of choler, cauſes an imagination that the honey is bitter.

Why have angry men fiery eyes?

Becauſe the blood about the heart is fervent, and the ſpirit hot, and ſo being very ſubtle and pure, and carried upwards, and by the eyes, which are clear they do ſhine, and have bloody vapors that aſcend with them, which makes the face red, which Homer not being ignorant of, ſays "*And his eyes were like a burning flame.*

Why doth water caſt upon ſerpants cauſe them to fly from us?

Becauſe they are cold and dry by nature, having but little blood, and therefore fly from exceſſive coldneſs. And that they be of this quality is plain, becauſe they ſeek for dens and ſecret places in the earth, as being warm: At ſun ſet they ſhun the air, as being cold; and again in ſummer, becauſe the bowels of the earth are cold they find out he warmeſt places.

Why doth an egg break if it be roaſted, and not if boiled.

The reaſon is when moiſture comes near the fire, it heats it too much and ſo breeds much wind, which being pent up in a little, forceth its way out, and ſo breaks the ſhell. The like happens in tubs, or earthen veſſels, when new wine is put in them. Much phlegm breaks the ſhell of an egg in roaſting, the which doth happen in earthen pots too much heated; wherefore the common people wet an egg when they intend to roaſt it. Hot water through its ſoftneſs, doth ſeparate its humidity by little and little, and ſo diſſolves it through the paſſages that are in the ſhells.

Why do men, in the act of carnal copulation, in a manner wink and find a like alteration in all ſenſes?

Becauſe that being overcome with the effect of that pleaſure, they do comprehend it better, winking as it were with their eyes. They are not lifted up, nor do carry the wind abroad into the air with the ſenſes, whereby they would diſcern thoſe corporeal affections.

Why have ſome medicines of one kind contrary force, as experience doth teach, maſtic doth expel, diſſolve, and ſo knit; vinegar both cools and heats?

Becauſe there are ſome ſmall inviſible bodies of them, not by confuſion but by interpoſition; as ſand moiſtened doth clog together, and ſeems to be but one body, though indeed there are many ſmall bodies in ſand. Since this is ſo, it is not abſurd that contrary qualities and virtues ſhould be hidden in maſtic, and nature hath given the law to theſe bodies.

Why do our privities ſwell when we hurt one of our toes?

Nature caring for thoſe things which belong to the body, haſtes to aſſiſt the part grieved and becauſe ſhe hath the moſt profitable and nouriſhing of all the humors, it is requiſite when ſhe doth deſcend to the toe with the blood, that thoſe veins be filled which are about the privy members.

Why doth not nature give birds a bladder, or a receptacle for urine?

Becauſe they do want much moiſture to give the matter for feathers to grow, and that they do conſume with the exerciſe of flying; neither do they piſs at all, and when they drink they void very much dung.

Why have children gravel breeding in their bladder, and old men in their kidneys, and reins of the kidneys?

Becauſe children have ſtraight paſſages in the kidneys, and an earthy thick humor is thruſt with violence by the urine from the faſhion of the moon, even to the bladder, which hath wide conduits or paſſages that give room for the urine and humor, whereof gravel is engendered, to wax thick and ſeat itſelf, as the cuſtom of it is. In old men it is the reverſe, for they have

wide paſſages of the reins, back, and kidneys, that the urine may paſs away, and the earthy humor congeal and ſink down; the color of the gravel ſhews the humor whereof the ſtones come.

Why, if the ſtone do congeal and wax hard through heat, (children are hot, and by the ſame reaſon it is done in old men, for there is not ſo much cold to be granted as there is in ice or ſnow, through which extreme cold the kidneys would periſh) yet we uſe not contrary things to diſſolve coldneſs, but light things as parſley, fennel and ſuch like.

They ſay it falleth out that by exceſſive heat and ſcorching, the ſtones do crumble into ſand, as in earthen veſſels which when they are overheated or roaſted, they become ſand. And by this means it happens that ſmall ſtones are voided together with ſand in making water. Sometimes cold drinks thruſt out the ſtones, the kidneys being ſtretched, and caſting out by greater laſk, and eaſing the belly of its burden Beſides it often happens that an immoderate heat of the kidneys or of the reins of the back (through which the ſtone doth grow) is quenched with coldneſs.

Why is the curing an ulcer or bile in the kidneys or bladder very hard?

Becauſe the urine being very ſharp, doth exulcerate the wound while good and fit medicaments would cover the ſkin. Ulcers are harder to cure in the bladder than in the kidneys, becauſe urine ſtays in the former, but runs away from the latter.

What is the reaſon that in bathing veſſels, the hot water, when it is ſtirred, ſeems the hotter to us, almoſt burning our bodies?

Becauſe, when we enter theſe ſorts of baths, the water itſelf doth ſuffer, that is, when the water heats our bodies it is made colder by us. We have learned that whatever works in generation of corruption, the ſame (without all doubt) doth ſuffer; the water then being in ſome ſort cooled, doth not heat alike, and we being accuſtomed to it, do not feel the heat as we did in the beginning, becauſe it is diminiſhed. If, by ſtirring the water, more heat is added, which neither hath yet wrought or ſuffered any thing of the body which is in it, that will ſeem very hot and ſcalding, in regard that it ſuffers by ſomething and ſo by degrees loſes its heat, as the firſt did.

How is it that whatſoever is moved, is hotter for it, eſpecially in ſummer, when the heat of the ſun is moſt violent.

This ſeems a contradiction to the other; for hot water did not ſeem hotter to us by moving. Therefore, it is a common thing for what is moſt and principal in any thing, either in quantity or quality, to overcome and change that which is leſs and weaker: and that which is ſtrong doth ſomewhat ſuffer again in doing. Wherefore the hot water, when it is very hot, ſticking to the hot body cools, and does not retain the ſame quality. The air then, which doth compaſs us about, being hot in ſummer like the water compaſſing our bodies, is ſomewhat heated by us, who are hot through the ſeaſon it heats us as linen garments do, which being firſt cold, and then ſtirred, that air which was

before heated by us is driven away, and another, not heated, succeeds and seems cold to us.

Why do those sores which breed in the ball of the eyes seem white, when they have less growing, and are cold, and others do not seem so that grow out of the ball ?

Because through the ball of the eye the sight proceedeth, which is bright and clear, therefore in the white of the eye, when the wound doth make thick that part of the covering which is like a horn, the spirit of the sight cannot issue out ; hence it comes to pass (much of it being got together) it makes the wound light and clear, shewing it white ; and because of the quietness of the sight, the spirit cannot go out, it causes blindness.

Why doth chaff and straw keep water hot, and snow cold, which are seemingly contraries ?

Because the nature of chaff wants a manifest quality ; seeing therefore, that of their nature, they can easily be mingled, and consumed with that which they are annexed unto, they easily also take the same nature unto them ; and therefore being put into hot things, they are easily hot, and do heat again, and keep hot ; and, on the contrary being made cold of the snow, and making the snow cold, do keep in its coldness. So wax and oil will easily be consumed, and made one with another thing, and do help the quality which is mingled with them, as being made one with them.

Why do the stars and heaven seem clearest in the bright winter time ?

Because the air, either which doth compass us, or that which is highest, is made thin and purged with winds and showers of rain, and by that means our sight doth see both further and clearer. The like is manifestly seen in running rivers ; for such things as are in them are far better seen than in the thick standing puddle of water, where, either nothing is seen, or confusedly.

Why have we oftentimes a pain in making water ?

Because that sharp choler issuing out and pricking the bladder of the urine, doth provoke and stir up the whole body to ease the part offended, and to expel the humor moderately. This doth happen mostly to children, because they have moist excrements, by reason of their often filling.

Why do nurses rock and move their children when they would have them sleep ?

To the end that the humors, being scattered by moving, may move the brains ; but those of more years cannot endure this.

Why do some drunkards see double ?

Because the muscles of the sight being more or less filled, and by the self same means weak and feeble, do draw one eye upward, and the other downward, and by that means the beams do not look that way at once, but towards divers places and bodies ; and therefore, each of the eyes using a private office and duty of seeing, doth cause a double sight.

Why are boys apt to change their voices about fourteen years of age ?

Becauſe that then nature doth cauſe a great and ſudden change of age; experience proveth this to be true, for at that time we may ſee that womans' paps do grow great to hold and gather milk, and alſo thoſe places that are above the hips, in which the young fruit ſhould remain. Likewiſe mens' breaſts and ſhoulders, which bear them great and heavy burdens. Alſo their ſtones in which their ſeed may increaſe and abide, and their privy members, to let out the ſeed with eaſe. Further, all the whole body is made larger and dilated, as the alteration and change of every part doth teſtify, and the harſhneſs of the voice and hoarſeneſs; for the rough artery, the wind pipe, being made wide in the beginning, and the exterior and outward part within equal to the throat, the air going out at the rough, unequal and uneven pipe, doth become unequal and ſharp, and after a ſort hoarſe like unto the voice of a goat, wherefore it has its name *Bronchus* The ſame doth happen to them unto whoſe rough artery diſtillation doth flow: It happens by reaſon of the drooping humidity that a light ſmall ſkin filled unequally cauſes the uneven going forth of the ſpirit and air. Underſtand that the wind pipe of goats is ſuch by reaſon of the abundance of humidity. The like doth happen unto all ſuch as nature hath given a rough artery, as unto cranes. After the years of fourteen they leave off that voice, becauſe the artery is made wider, and reacheth its natural evenneſs and quality.

Why doth oil, being drunk cauſe one to vomit, and eſpecially yellow choler?

Becauſe that ſeeing it is light, and aſcending upwards, it provoketh the nutriment in the ſtomach, and lifteth it up, and ſo the ſtomach being grieved, ſummoneth the ejective virtue to vomit, and eſpecially choler, becauſe that is light, and conſiſteth of ſubtile parts and therefore it is the ſooner carried upward; for when it is mingled with any moiſt thing, runneth into the higheſt room.

Why doth not oil mingle with moiſt things?

Becauſe that being pliant, ſoft, and conſtipate in itſelf, it cannot be divided into parts, and ſo cannot be mingled; neither if it be put on earth, cannot it enter into it.

Why is water and oil frozen in cold weather, and wine and vinegar in hot?

Becauſe that oil being without all quality, and fit to be compounded with any thing, is cold quickly, and ſo extremely that it is moſt cold Water being cold of nature, doth eaſily freeze when it is made colder than its own nature. Wine being hot. and of ſubtle parts, is not ſo ſoon cold, but vinegar being of moſt ſubtle parts, ſuffereth no freezing.

Why do contrary things in quality produce the ſame effect?

That which is moiſt is hardened, and abounds alike of heat and of cold. Snow and liquids do freeze with cold; a plaiſter and gravel in the bladder, are made hot with heat. The heat doth conſume, and eat the abundance of moiſture; but the cold ſtopping and ſhutting with its overmuch thickneſs, doth ring out the fifthy humidity, like as the ſponge wrung with the hand

doth caſt out the water which it hath in the pores or ſmall paſſages

Why doth a ſhaking or quivering ſeize us oftentimes, when any fearful matter doth happen, as a great noiſe or a crack made by the ſudden downfal of water or a great tree?

Becauſe that often times the humors being digeſted and conſumed with time and made thin and weak, all the heat vehemently, ſuddenly, and ſharply flying into the inward part of the body, conſumeth the humors which cauſed the diſeaſe. So treacle hath its effect, and many ſuch like, which are hot and dry, when they are taken after concoction.

Why do ſteel glaſſes ſhine ſo clearly?

Becauſe they are lined in the inſide with white led, whoſe nature is ſhining, which being put to the glaſs, which is alſo ſhining, doth ſhine much more; and caſting its beams through the paſſages of the glaſs, doth double that which is in the ſuperficial parts of the glaſs, and without the body of the glaſs, and by that means the glaſs is very ſhining and clear.

Why do we ſee ourſelves in glaſſes and clear water?

Becauſe the quality of the ſight paſſing into the bright bodies by reflection, doth turn again by the beam of the eyes, as the image of him who looked on it. That qualities do go forth and paſs from the face, as it is not abſurd, they do ſhew which remain near unto trees, becauſe they are wont to look green, for the green quality of green leaves paſſeth to the face of itſelf; likewiſe going into the running water doth make it ſhew green.

Why do hard dens, hollow and high places, ſend back the likeneſs and ſound of the voice?

Becauſe that in ſuch places reflection returns back the image of a ſound; for the voice doth beat the air, and the air the place, which the more it is beaten the more it doth beat, and therefore doth cauſe the more vehement ſound of the voice; moiſt places as it were ſoft, yielding to the ſtroke and diſſolving it, give no ſound again: for according to the quality and quantity of the ſtroke, the quality and quantity of the voice is given, which is called an echo. Some doubly fable, that ſhe is a goddeſs; ſome ſay that Pan was in love with her, which without doubt is falſe. He was ſome wiſe man, who did firſt deſire to ſearch out the cauſe of that voice; and as they who love, and cannot enjoy their love, are grieved, ſo in like manner, was he very ſorry until he found out the ſolution of that cauſe. As Endymion alſo, who firſt found out the courſe of the moon, watching night, and obſerving her courſe, and ſearching her motion, did ſleep in the day time, and therefore they do fable that he was beloved of her, and that ſhe came to him when he was aſleep, becauſe ſhe did give to the philoſopher the ſolution of the courſe of herſelf. They ſay alſo, that he was a ſhepherd, becauſe that in the deſert and high places, he did mark the courſe of the moon. And they give him alſo the pipe, becauſe the high places are blown with wind, or elſe becauſe he ſought out the conſonancy of figures. Prometheus alſo being a wiſe man, ſought the courſe of the ſtars, which is called the eagle in the firmament, his nature and place; and when he was, as it were, waſted with the de-

ſire of learning, then at the laſt he reſted, when Hercules did reſolve unto him all doubts with his wiſdom.

What is the reaſon that if you caſt a ſtone into ſtanding water, it makes many circles, and not if the water be deep in the earth?

Becauſe that the ſtone with the vehemence of the caſt doth purſue and follow the water from every part of it, until the ſtone come to the bottom; for if there be a very great vehemency in the throw, the circle is the greater, the ſtone going down upon the earth, cauſeth many circles. For firſt of all, it doth drive the overmoſt and ſuperficial parts of the water into many parts, and ſo going down always to the bottom, again dividing the water it maketh into another circle, and this is done ſucceſſively, until the ſtone reſteth; and becauſe the vehemency of the ſtone is ſlackened ſtill as it goes down, of neceſſity the laſt circle is leſſer than the firſt, becauſe that with the ſtone and alſo with the body the water is divided.

Why do ſome think that laughter proceeds from the ſpleen, affirming that it is not like that they laugh as much, whoſe ſpeen is corrupted, as they whoſe ſpeen is ſound, but ſay that ſuch are very ſad?

Truly, I think that the cauſe of laughter is accidental, and not properly the ſpleen; for, if it be ſound and perfect, it doth draw from the liver melancholy humors, whereof it proceedeth, that when the pure blood, without any dregs, doth go through the whole body, and alſo in the brain it doth delight both nature and mind, and doth make men merry like unto wine and bring them to a quietneſs and tranquillity, and ſo that of laughter is moved.

Why do not mules bring forth young ones?

Becauſe they proceed of divers kinds of beaſts, and ſo then the mixture of ſeed differing in quality and quantity, begets a certain other thing; beſides, that which is firſt doth mar and aboliſh the nature of thoſe things which were laſt, as the mingling of white and black, aboliſhing the color of excrements, breedeth another color which is dark and dun, which is none at all of the extreme; therefore, the engendering quality is aboliſhed, and the aptneſs of receiving form.

Why are ſuch as are deaf by nature dumb?

Becauſe they cannot ſpeak and expreſs that which they never heard; ſome phyſicians ſay, that there is one knitting and uniting of ſinews belonging to the like diſpoſition. But ſuch as are dumb by an accident, are not deaf at all, for then there ariſeth a local paſſion.

Why do not ſwine cry when they are carried with their ſnouts upwards?

Becauſe that above all other beaſts they bend more than others to the earth. They delight in filth, and that they ſeek, and therefore in the ſudden change of their face, they are as it were ſtrangers; and being amazed with ſo much light, do keep ſilence; ſome ſay the wind pipe doth cloſe together by reaſon of the ſtraitneſs of it.

Why do ſwine delight in dirt?

As the phyſicians ſay; they are naturally delighted with it, becauſe they have a great liver, in which deſire is; the wideneſs of their ſnout is the cauſe, for he hath ſmelling which doth diſſolve itſelf, and as it were ſtrive with ſtench.

Why doth itching ariſe when an ulcer doth wax whole, and phlegm ceaſe?

Becauſe the part which is healed and made ſound doth purſue the relick of the humors which remaineth there againſt nature, and which was the cauſe of the bile, and ſo going out through the ſkin, and diſſolving itſelf, doth originally cauſe the itch.

Why are thoſe diſeaſes and accidents longeſt and moſt grievous which moleſt one eye and not both?

For two reaſons: firſt, becauſe a running fluxion is heaped up at one eye only; for, whatſoever is divided into many, is weaker than when entire, and of a leſſer force: ſecondly, becauſe, when the whole eye doth make any motion, it often obligeth the ailing eye to move too, and the help for any diſeaſed part conſiſts in quietude.

How comes a man to ſneeze oftener and more vehemently than a beaſt?

Becauſe he uſes more meats and drinks, and of more different ſorts, and that more than requiſite, which when he cannot digeſt as he would he doth gather together much air and ſpirit by reaſon of much humidity, the ſpirits being then very ſubtle, aſcending into the head, often forces a man to void it, and ſo provoke ſneezing. The noiſe cauſed thereby proceeds from a vehement ſpirit or breath paſſing through the conduits of the noſtrils, as belching does by the ſtomach, or f——g by the fundament, the voice by the throat, and a ſound by the ears.

How come the nails and hair of dead people to grow?

Becauſe the fleſh rotting, withering, falling away, that which was hidden about the root of the hair doth now appear, and cauſes an imagination that the hair doth grow; ſome ſay it grows indeed, becauſe the dead carcaſes are diſſolved, in the beginning to many excrements and ſuperfluities, by reaſon of the putrefaction which comes to them. Theſe going out at the uppermoſt parts of the body by ſome paſſages do increaſe the growth of the hair.

Why doth not the hair of the feet grow preſently grey?

Becauſe that through great motion they diſperſe and diſſolve the ſuperfluous phlegm that breeds greyneſs. The hair of the ſecrets do grow grey very late, becauſe of the heat of the place and becauſe that in carnal copulation it does diſſolve the phlegm alſo.

Why do many beaſts wag their tails when they ſee their friends and a lion and a bull beat their ſides when they are angry?

Becauſe they have the marrow in their backs reaching to the tail, which hath the force of motion in it, the imagination acknowledges that which is known to them, doth force them to move their tail, as men do their hands. This doth manifeſtly ſhew ſome ſecret force to be within them, which doth acknowledge what they ought In the anger of lions and bulls, nature doth conſent to the mind, and cauſeth it to be greatly moved, as men do ſometimes when they are angry beating their hands on

other parts; when the mind cannot be revenged on that which doth hurt, it presently seeks out some other solace, and cures the malady with a stroke or blow.

Why, if you put hot burnt barley upon a horse's sore, is the hair which grows upon the sore not white, but like the other hair?

Because it hath the force of expelling, and doth wipe away and dissolve the excrements of phlegm, as likewise all unprofitable matter that is gathered together through the weakness of the parts or crudity of the sore.

Why doth hair never grow on an ulcer or a bile?

The reason is, a man hath a thick skin, as is seen by the thickness of the hair; and since the scar is thicker than the skin itself, it stops the passage from whence the hair should grow. Horses have thinner skins, as is plain by the thick hair: therefore, all passages are not stopt in their wounds and sores, and after the excrements, which were gathered together, have broke a passage through those small pores, the hair doth grow.

What is the reason that such as are bitten with a snake, if they are thirsty, quench it by drinking of treacle which is hot and dry.

I say then, it doth not quench thirst solely by its own quality, but by some mutual sympathy and consent, and natural reason. It is a kind of counterpoison, and a preservative too, being composed of divers sorts of herbs that have some kind of agreement with all the parts of the body, as dictamnum, dittanger, or ginger, hath a proportionable conservation of the heart: agrimony or liver wort with the liver; stone wort or finger fern with the spleen; parsley with the mouth of the belly; hyssop with the lungs; elecampane with the reins of the back: rue with the neck; bitterwort the brain; and filer montanum with the bladder. Every one of these drawn as it were with the sweetness of honey, doth draw that which is best for his safety; among all of these the blood of some vipers is mingled, which hath a certain natural disaffection, which we call antipharmicum, a contrary of all natural qualities against every venomous beast and corruptible creature. These being distributed into every part they suffer nothing to work that effect which doth threaten corruption, for they do resist, like lawful soldiers who have taken arms for the defence of their country.

Why is fortune painted with a double forehead, one side bald, and the other hairy?

The baldness signifies adversity, and hairiness prosperity, which we enjoy when it pleases her.

Why have some commended flattery?

Because flattery setteth forth before our eyes what we ought to be, though not what we are.

Wherefore should virtue be painted girded?

To shew that virtuous men should not be slothful, but diligent and always in action.

Why did the ancients say it was better to fall into the hands of a raven, that a flatterer?

Because the ravens don't eat us till we be dead, but flatterers devour us alive.

Why have choleric men beards before others?

Becauſe they are hot, and their pores large and wide.

How comes it that ſuch as have the hicup do eaſe themſelves by holding their breath?

The breath retained doth heat the interior parts of the body and the hicup proceeds from nothing but cold.

How comes it that old men remember well that which they have ſeen and done in their youth, and forget things as they ſee and do in their age?

Things learned in youth have taken root and habituate in the perſon, but thoſe learnt in age are forgotten, becauſe the ſenſes are weakened in them.

What kind of covetouſneſs is beſt?

That of time when it is employed as it ought to be.

Why is our life compared to a ſtage play?

Becauſe the diſhoneſt do occupy the place of the honeſt, and the worſt ſort the room of the good.

Why do dolphins, when they appear above the water denote ſome ſtorm or tempeſt approaching?

Becauſe that, at the beginning of the tempeſt, there do ariſe from the bottom of the ſea certain hot exhalations and vapors which heat the dolphins, cauſing them to riſe up and ſeek for cold.

Why are things more quiet in the night than in the day?

The motion of the air, and the coldneſs of night, is the cauſe thereof, which coldneſs continues and hinders the motions.

How come the Romans to call Fabius Maximus the target of the people, and Marcellus the ſword?

Becauſe the one adapted himſelf to the ſervice of the commonwealth, and the other was very eager to revenge the injuries of his country? and yet they were in the ſenate joined together, becauſe the gravity of the one would moderate the courage and brevity of the other.

Why does the ſhining of the moon hurt the head?

Becauſe it moves the humors of the brain and cannot afterwards reſolve them.

If water do not nouriſh why do men drink it?

Water cauſes the nutriment to ſpread through the body.

Why is ſneezing good?

It purgeth the brain, as milk is purged by the cough.

Where is the ſeat of the affections of the body?

Joy dwelleth in the ſpleen, anger in the gall, fear in the heart, and lechery in the liver.

Why is hot water lighter than cold?

Becauſe the boiling water has leſs ventoſity, and is more light and ſubtle, the earthy and heavy ſubſtance being ſeparated from it.

How come marſh and pond water to be evil?

By reaſon they are phlegmatic, and do corrupt in ſummer time, the fineneſs of the water is turned into vapors, and the earthineſs doth remain.

Why are ſtudious and learned men ſooneſt bald?

It proceeds from a weakneſs of the ſpirits, or becauſe warmth of digeſtion cauſes phlegm to abound in them.

Why doth much watching make the Brain feeble ?

Becauſe it increaſes choler, which dries and extenuates the body.

Why are ſteel glaſſes better for the ſight than others ?

Steel is hard, and doth preſent unto us more ſubſtantially the air that receiveth the light.

How doth love ſhow its greateſt force, by making the fool to become wiſe, or the wiſe become a fool ?

It attributes wiſdom to him that hath it not; for it is harder to build than to pull down, and ordinary love and folly are but an alteration of the mind.

How comes too much labor to be bad for the ſight ?

Becauſe it dries the blood too much.

Why is goats' milk counted beſt for the ſtomach ?

Becauſe it is thick, not ſlimy, and they feed upon boughs and wood rather than graſs.

Why do grief and vexation bring gray hairs ?

Becauſe it dries, and age is nothing elſe.

How is he the moſt merry that hath the thickeſt blood ?

The blood which is fat and thick makes the ſpirits firm and conſtant, wherein conſiſts the force of all creatures.

In your opinion which is hardeſt, to obtain the love of a perſon, or to keep it when obtained ?

To keep it, by reaſon of the inconſtancy of man, who is quickly angry, and ſoon weary of a thing; hard to be got and ſlippery to keep.

Why do ſerpents ſhun the herb rue ?

Becauſe they are cold, dry, and full of ſinews, but the herb rue is of a contrary nature.

How comes a capon better to eat than a cock ?

The capon loſes not his moiſture becauſe he does not tread the hens and therefore is better.

Why do we ſmell a thing leſs in the winter than in the ſummer?

Becauſe the air is thick, and leſs movable.

How comes hair to burn ſo quick as it does ?

Becauſe the hair is dry and cold.

Why is love compared to labyrinth ?

Becauſe the entry and coming in is eaſy, and the going out impoſſible, or very hard.

THE END.

ARISTOTLE's

LAST LEGACY,

UNFOLDING THE

MYSTERIES OF NATURE

IN THE

GENERATION OF MAN.

TREATING,

I. Of VIRGINITY, its SIGNS and TOKENS, and how a MAN may know whether he hath MARRIED a VIRGIN or not.

II. Of the ORGAN of GENERATION in WOMEN, with a deſcription of the WOMB.

III. Of the USE and ACTION of the GENITALS in the WORK of GENERATION.

IV. Of CONCEPTION; and how to know whether a WOMAN has CONCEIVED, and whether of a MALE or FEMALE.

V. Of the PLEASURE and ADVANTAGE of MARRIAGE; with the unhappy CONSEQUENCES of unequal MATCHES, and MISERIES of UNLAWFUL LOVE.

VI. Of BARRENNESS, with REMEDIES againſt it; and the SIGNS of the INSUFFICIENCY both in MEN and WOMEN.

VII. DIRECTIONS to both SEXES how to manage themſelves in the ACT of COITION, or their VENEREAL EMBRACES.

VIII. A VADE MECUM for MIDWIVES and NURSES; Containing particular DIRECTIONS for the faithful DISCHARGE of their ſeveral EMPLOYMENTS

IX. EXCELLENT REMEDIES againſt all DISEASES incident to VIRGINS and CHILD BEARING WOMEN; fitted for the uſe of MIDWIVES, &c.

INTRODUCTION.

WHEN the almighty Architect of the world had formed the heaven in the beginning, and laid the foundation of the earth, and by his blessed Spirit moving upon the abyss, had created a fair and beautiful world, out of a rude mass and undigested chaos, and by his powerful fiat had brought into being all the several species of vegetables and animals, and given even to the plants and vegetables to have seed in themselves for producing their several kinds or forms, and to the animals (which he created male, and female) the power of propagating their species, and had adorned the world with all those beautiful and glorious embellishments, that his omnipotent wisdom and goodness saw fit and requisite for that great guest he designed to bring into it; he at last created man as a microcosm, or lesser world to be lord of this greater world, not with a bare fiat only, as he did the rest of his creatures, but called (as it were) a council of the sacred Trinity about it, saying, Let us make man in our own image, after our own likeness, &c. as the divine historian expresses: So that man, in his original, is a ray of the divinity, and the very breath of the Almighty; and therefore it is said, God breathed into his nostrils the breath of life, and he became a living soul. Man being thus created, and made lord of the world, had in himself at first both sexes, for the text tells us, Male and female created he them, and called their name Adam: but yet till Adam was divided he was still alone; and every creature had a mate, he was lord of all; so that in paradise itself he seemed to be unhappy, wanting a meet help; and therefore his munificent Maker resolving to make him completely happy, divides himself from himself, that by a more agreeable conjunction, he might be united to himself again; and so of a part of himself was formed Eve, whom Adam, having never seen before, by a sympathy of nature, presently called, bone of his bone, and flesh of his flesh: And Adam having thus found a meet help given him by his Creator, he was now completely happy, and being blessed by the Almighty, had this law also given him, to increase and multiply, he being endowed with a natural propension thereunto, and the woman having a plastic power given her by nature for the formation of the embryo. This natural inclination and propension of both sexes to each other, with the plastic power of nature, is only the energy of the first blessing and command of the Almighty, which to this day upholds the world.

The mystery of the generation of that noblest piece of creation man, and the unfolding of the plastic power of nature, in the secret workings of generation, and formation of the seed in the womb, is the subject of the following treatise: a subject so necessary to be known by all the female sex (the conception and bearing of children being that which nature has ordained their province) that many for want of the knowledge hereof perish, with the fruit of their womb also, who had they but understood the secrets of generation displayed in this book, might have been still in the land of the living.

'Tis therefore for the use of such that this treatise is compiled: wherein the mystery of generation is not only unravelled, and the abstruse secrets of nature made known, but the obstructions and hinderances of generation are declared, and proper remedies against all the defects of the womb directed.

ARISTOTLE's LAST LEGACY.

Fully unfolding the MYSTERIES of NATURE in the GENERATION of MAN.

Of Virginity, what it is, its Signs and Tokens, and how a Man may know if he marries a Virgin.

THE great maker of the univerſe, that gives all creatures life and being, and a power in themſelves to propagate their kind, even to the end of the world, has to that end created them male and female, and theſe of contrary qualities; for, in this noble pair, man and woman, the man is hot and dry, the woman cold and moiſt; and theſe two different qualities uniting, are ordained by nature for the procreation of children, the ſeed of the man being the efficient cauſe, and the womb of the woman the field of generation, wherein the ſeed is nouriſhed, and the embryo formed, and in due time brought forth.

Since women then have ſo great part in the generation of man, I ſhall endeavor to ſhew how nature has fitted them for it; and becauſe a knowledge of the diſeaſe is half the cure, I will give a brief deſcription of the ſeveral parts or members of generation, that ſo, if at any time, any part be affected, or out of order, it may be ſooner rectified: And although I muſt uſe plainneſs, yet I hope to do it ſo as not to cauſe a guilty bluſh on the cheek of the fair ſex.

And ſince the firſt ſtate of woman is virginity, order and method require that I ſpeak ſomething of that; and in ſpeaking on it, I will firſt ſhew what it is, and then lay down ſome ſigns and tokens of it, how it may be known, and then proceed to what I have before promiſed.

Virginity is the boaſt and pride of the fair ſex, though they generally commend it to put it off, and that they may the ſooner get a good husband and thereby loſe it: And I think they are in the right, for, if they keep it too long, it grows uſeleſs, or at leaſt abates much of its value: a ſtale virgin being looked upon like an old almanack out of date. Virginity the chief, the beſt, the prime of any thing, and is properly the integrity of woman's privities, not violated by man or known by him, it being the property of a virgin not to have known man. But to come a little more cloſe, there is in young maidens, in the neck of the womb, a pendulous production called Hymen, which is like the bud of a roſe half blown, and this is broke in the firſt act of copulation with a man, and from thence the word *deflora*, to deflower, becauſe the taking away of virginity is deflowering a virgin, for when the roſe bud is expanded, virginity is wholly loſt. Certain it is, there is in the firſt act of copulation, ſomething which cauſeth pain and bleeding, which is an evident ſign of virginity, but, what this is, authors agree not: Some ſay it is a nervous membrane, or thin ſkin, with ſmall veins, which bleed at the firſt penetration of the yard: Others ſay it is four

caruncles, or bits of flesh, or little buds like myrtle berries, and these are plump and full in virgins, but hang loose and flag in those that have used copulation. Some have observed a fleshy circle about the nymphæ or neck of the womb, with little obscure veins, which make the membrane not to be nervous, but fleshy.

There is no doubt but that the part which receiveth the yard is not in women that have used a man, as it is in virgins, and yet it is not alike in all, which hath caused diversity of opinions both in authors and anatomists, for this is not found in all virgins: Excess of lust, and desire of a man, in some, may break the Hymen, or claustrum virginale; sometimes when it itcheth, they put in their finger and so break it: sometimes the midwives break it in the birth; and sometimes it is done by stopping of the urine, coughing, violent straining, or sneezing and therefore, if there be no bleeding at the first penetration, it is not always a sign of unchastity; but where there is bleeding it is an unquestionable sign of virginity.

Leo Africanus makes mention of the custom of the Africans at their weddings, which was this; After they were married, the bridegroom and the bride were shut up in a chamber, whilst the wedding dinner was preparing, and an old woman stood at the chamber door to receive from the bridegroom a sheet, having the bloody tokens of the wife's virginity, which she shewed in triumph to all the guests, and then they might feast with joy; but if there was no blood to be seen, the bride was sent home with disgrace, and the disappointed guests went home sadly without their dinner. But notwithstanding the African custom I affirm that some honest virgins have lost their maidenheads without bleeding, and therefore are not to be censured for want of this token, as some ignorant men may do, and cause their wives to live an uncomfortable life all their days, fancying themselves to be cuckolds, when there is no such matter.

Some make the straitness of the privities to be a sign of virginity, but this is no certain rule, for much depends upon the age, habit of body, and other circumstances: Though it cannot but be acknowledged, that women that have used carnal copulation are not so strait as virgins, yet this can be no certain argument of virginity for, after repeated acts of venery, the privities may be made so straight by the use of astringent medicines, that a whore may be sometimes taken for a virgin. Culpepper mentions a woman that desiring to appear a virgin, used a bath of comfrey roots, whereby she deceived those with whom she had to do.

Some make milk in the breast a sign of lost virginity, not considering there is a twofold milk, the one of virgins contrary to nature, the other natural: The first is made of blood that cannot get out of the womb, and so goes to the breasts, being nothing but a superfluous nourishment that is turned into milk by the faculty of the breasts without the knowledge of a man: the other is only when there is a child either in the womb, or horn; And the milk differs very much, both in respect of the blood and diversity of veins that bring it to the breast and though both

are white, yet that of virgins is thinner, leſs in quantity and not ſo ſweet; and therefore, if virgins happen to have ſuch milk, they are not for that reaſon to be deemed unchaſte.

Upon the whole, when a man marries, and finds, upon lying with his wife, the token of her virginity he has all the reaſon in the world to be ſatisfied he has married a virgin: but if on the contrary, he finds them not, he has no reaſon to ſuſpect her of unchaſtity, as if ſhe were not a virgin, ſince the hymen, or clauſtrum virginale may be broken ſo many other ways, and yet the woman be both virtuous and chaſte.

And thus much I thought myſelf bound to ſay in behalf of the female ſex, who are often accuſed and ſuſpected of diſhoneſty, when there is no occaſion for it.

CHAP. II.

Of the Organs of generation in Women, with a Deſcription of the Fabric of a Woman.

IN Deſcribing the organs of generation in women, I ſhall uſe all poſſible plainneſs and perſpicuity, and ſhall not be afraid to ſpeak ſo as I may be underſtood by the meaneſt capacity, ſince I deſign nothing but the inſtruction of the ignorant, for their own ſafety, and ſhall ſay with the motto of the royal garter, *Honi ſoit qui maly penſe.*

In the genitals of women there are ſeveral parts which muſt be diſtinctly ſpoken of: That which appears to view at the bottom of the belly is the *fiſſura magna*, or the great clift or fiſſure of an oval form, with its hair about it, alſo the lips, which nature deſigned to keep the internal parts from cold and duſt: Theſe are called by the general name of *pudenda*, from ſhamefacedneſs, becauſe a woman is aſhamed when thoſe parts are diſcovered or made bare. The *fiſſura magna* reaches from the lower parts of the os pubis, near to the *annus*; but it is cloſer in virgins than in thoſe who have born children, and has two lips, which towards the *pubis* grow more full and thick, and meeting upon the middle of the *os pubis*, make that riſing hill called *mons Veneris* or the mount of Venus.

The next thing is the *nymphæ*, or wings which appear when the lips are ſevered, and are framed of ſpungy or ſoft fleſh, of a red color, two in number, joined in an acute angle producing there a fleſhy ſubſtance compoſing the clytoris, and both in form and color reſembling the comb of a cock.

The *clitoris* is a ſinewy and hard body, full of ſpungy and black matter within: and in form repreſents the yard of a man and is ſubject to erection and falling as that does. This is that which is the ſeat of veneral pleaſure, and gives women delight in the act of copulation: For without this a woman neither deſires coition, nor hath pleaſure in it, nor conceives by it. The clytoris ſometimes grows out of the body two inches, but this very ſeldom happens. And ſome think that hermaphrodites, or thoſe that have the genitals, are only ſuch women in whom the clitoris hangs out extremely, and ſo reſemble the form of a yard: and I am almoſt inclined to be of their opinion, eſpecially conſidering that the hanging out of the clytoris, is generally occaſioned through extreme luſt: and both reaſon and authori-

ty demonſtrate that the higher the clytoris, in women, the more vehement their deſires are carried after coition, and conſequently the more luſtful.

In the fourth place, under the clytoris, and above the neck of the womb are the fleſhy knobs or caruncles, placed behind the wings, and are like myrtle berries placed one againſt another, in which place is inſerted the orifice of the bladder, for the paſſage of the woman's urine: ſo that the urine of the woman comes through the neck of the womb, neither is the paſſage of the urine common as in men, but particular by itſelf.

Near the orifice of the womb, as I have ſaid before, there are the caruncles, or fleſhy knobs, in number four, in form like myrtle berries; in virgins theſe are round and plump, but in women that have uſed copulation, theſe are looſe and flagging, and often quite undiſtinguiſhed, ſo that the inſide of the neck of the womb appears ſmooth: the uppermoſt of them is large and forked, the others are below this on the ſides, but they all ſerve to keep back the air, or any offenſive thing, from entering the neck of the womb. Theſe caruncles or knobs are joined together by a thin or ſinewy ſkin or membrane, full of ſmall veins this membrane hath a hole in the midſt for the paſſage of the monthly courſes, about the bigneſs of the top of one's little finger in ſuch as are in years fit for marriage; this is that noted ſkin called Hymen, of which I have ſpoken in the former chapter, and which is a certain ſign of virginity wherever it is found, for the firſt act of copulation ſurely breaks it, though it may be broken without the act of copulation but it is moſt generally broken by it.

Authors have been of divers opinions concerning this Hymen or mark of virginity; ſome affirm it to be one thing and ſome another; but whatever it be, this is an undoubted truth, that it hath certain veins in it which bleed in the breaking, and that blood ſhews it to be then firſt broke, and conſequently the perſon to be a virgin: and I do believe, that all virgins have at firſt, it being the mark that God gave the Hebrews to try their virginity by: and I cannot believe God would give that for a certain ſign of virginity which is not always to be found, and tho' it may be broke without copulation, yet young maidens ought to be very wary of it, ſince their honor does ſo much depend upon preſerving it. For men are not bound to believe it was broken by accident, though perhaps it might be ſo, to which end they ought to correct and expel all ſharp and corroding humors which ſometimes gnaw it aſunder, and alſo to avoid all violent exerciſes which may overſtrain them, and by all means touching it with their fingers. I have in the former chapter told you that the caruncles or fleſhy knobs, together with the Hymen, repreſent the form of a half blown roſe, from whence to deflower a virgin had it original.

The next thing to be ſpoken of is the neck of the womb, which is nothing but the diſtance that is between the privy paſſage and the mouth of the womb, into which the yard goes in the act of copulation, which in ſome women is eight inches in length; its ſubſtance without is fleſhy, but within ſkinny, and exceedingly wrinkled, that it may the better retain the ſeed ejected in the

act of copulation, and also that it may dilate and stretch in the woman's labor, and the passage may be the wider for the birth of the child. The length of the neck of the womb is very necessary for two reasons: First, that it may be filled with abundance of spirits, and there be dilated, for its better taking hold of the penis or yard, great heat being required in such motion, which becoming more intense or exquisite by the act of frication, consumes a great quantity of moisture, which there ought to be large vessels to supply: Secondly, because the terms or monthly courses make their way through them; on which account women with child sometimes continue their purgations: for although the womb be shut, yet the passage in the neck of the womb through which these vessels pass is open.

I will only further observe, that as soon as man penetrates the pudendum, there appears two little pits or holes, these contain an humor, which being pressed out in the time of copulation, gives great delight to a woman.

Having thus spoken of the organs of generation in women, I will now describe the fabric of the womb.

The womb is joined to its neck in the lower part of the hypogastrion, and is placed between the bladder and the straight gut. Its parts are two, the mouth of the womb and the bottom of the womb: The mouth or entrance may be both dilated and contracted, much like a purse, for though in the act of copulation it be big enough to receive the glands, nut, or top of the man's yard, yet after conception, it is so close shut, that it will not admit the point of a bodkin to enter: and after this, at the time of delivery, it dilates itself again so wide, that it makes room enough for the child to come forth, which is so wonderful a thing, that all men must acknowledge that the wisdom and goodness of our Creator is eminently to be seen in it.

Its figure is almost perfectly round, and in virgins doth not exceed the bigness of a walnut, yet after conception, it dilates itself gradually, so that it is able to contain the child and all its appurtenances

It is thick in substance, insomuch that it exceeds a thumb's breadth, which after conception, is so far from decreasing, that it augments very much: and to strengthen it more, it is interwoven with fibres over athwart, which are both straight and winding, and its proper vessels are veins, arteries, and nerves among which there are two little veins, which pass from the spermatic vessels to the bottom of the womb, and two larger from the hypogastrics, which touch the bottom and the neck: The mouth of the veins piercing as far as the inward cavity.

Also the womb hath two arteries on each side the spermatic vessels, and the hypogastrics, which still accompany the veins, also divers little nerves that are knit and entwined in the form of a net, and extended to the pudenda, placed chiefly for sense and pleasure, moving by way of sympathy between the head and the womb.

The stones and testicles in women differ in several respects from those of men, and that in relation to their place, form, figure, &c. As to the place, in men they are without the belly, in

women within : in men they are oval, and have four skins, to preserve them from injuries : in women they are depressed and flattish, and have but one skin : Their substance is also more soft than those of men, and their temperature is colder. Their office is to contain their ovum or egg, according to our modern authors : But the ancients were of opinion, that they served to connect the woman's seed, and had the same office in women as the stones have in men but as this of the woman's having seed is strongly opposed by some, and as strongly contended for by others, I will therefore set down the opinions of both, having first made an end of the description of the several parts belonging to the organ of generation in women, which is what I am now upon.

I come now to speak of the spermatic vessels in women, which are divided or distinguished by preparing vessels, and carrying vessels : the preparing vessels are the same in number as in men, which are four, two veins and two arteries, not differing from those in a man, but only in their largeness and manner of insertion ; the right vein issuing from the trunk of the vena cava, which is the great vein that receives the blood from the liver, and distributes it by branches to all the body, under the emulgent vein which is one of the chief branches of the hollow veins passing to the reins ; but the left springing from the emulgent of the same side. Both the arteries issue from the great artery called Aorta, because it is the noblest and mother of all the rest. These preparing vessels are much shorter in women than in men because their passage is shorter : The stones of a woman, as I have already noted, lying within the belly, but those of men without : but then what they want in length, they have in their various wreathings and contortions, which are more than in men that the substance they carry may be the better prepared, and therefore, their often turning to and fro, and winding in and out make amends for the shortness of the passage. Observe also, that these vessels are not united, as they are in men, before they come to the stones but are divided in two branches, whereof the greater only goeth, to the stones, and the lesser endeth in the womb, both for the nourishment of itself and the infant, and that part of the courses may pass through the vessels : These spermatic veins receive the arteries as they pass by the side of the womb, and so there is a mixture between the vital and natural blood, and thereby the work of generation might be better wrought; and thus much for the preparing vessels.

The carrying vessels called *vasa de ferentia* (that is vessels which carry the seed from the stones to the seminal vessels) arise from the lower part of the testicles, and are in color white, but in substance sinewy ; they pass not straight to the womb, but are wreathen, that the shortness of the way may be compensated by their various turnings and windings, and, as they come next to the womb, they grow broader.

The ejaculatory vessels are two passages on each side of the womb, and hardly differ in substance from the spermatic veins, they rise from the bottom of the womb but reach not either to the stones, or any other part, but are shut up and are impassable, adhering to the womb as the collar does to the hind gut,

winding half way about. Although the ſtones are at a diſtance from them, and do not ſo much as touch them, yet they are faſtened to them, by certain membranes, much reſembling the wings of a bat through which certain veins and arteries that paſs from the end of the teſticles have their paſſages, proceeding from the corners of the horns of the womb to the teſticles, being the proper ligaments by which the teſticles and the womb are knit together; and theſe ligaments in men are called creamaſters, which are the muſcles that hold up the ſtones, of which I ſhall ſpeak further, when I treat of the organs of generation in man.

CHAP. III.

Of the Uſe and Action of the Genitals in the Work of Generation.

THE uſe of the external parts, commonly called the pudenda, are deſigned to cover the great orifice, and the uſe of that is to receive the yard in the act of copulation, and to give paſſage to the child at the birth; and alſo a paſſage for the urine. The uſe of the wings and knobs like myrtle berries are for the ſecurity of the internal parts, ſhutting the orifice and neck of the bladder; and by their ſwelling up do cauſe titillation and delight in thoſe parts, and alſo to hinder the involuntary paſſage of the urine. The action of the clytoris in women is like that of the yard in men, which is erection, and its outer end is like the glans, or top of the yard, and has the ſame name, and as the glans in men is the ſeat of the greateſt pleaſure in copulation, ſo is this in women.

The action and uſe of the neck of the womb is equal with that of the yard, and is occaſioned ſeveral ways; for firſt, it is erected and made ſtraight for the paſſage of the yard to the womb in the act of copulation; and then whilſt the paſſage is repleted with ſpirit and vital blood, it becomes more ſtraight for embracing the yard; and the convenience of erection is two fold; firſt if the neck of the womb was not erected, the yard could have no convenient paſſage to the womb; and in the ſecond place, it hinders any damage that may happen, through the violent concuſſion of the yard in the time of copulation.

And as for thoſe veſſels that make their way through the neck of the womb, their office is to repleniſh it with blood and ſpirit, that ſo as the moiſture conſumes by the heat contracted in copulation, it may by thoſe veſſels be renewed; but their chief buſineſs is to convey nouriſhment to the womb.

The womb has many properties attributed to it; the firſt is the retention of the ſeed; as the ancients ſpeak, of the ſecundated egg, as others would have it; and this properly is called conception; and, 2dly, to cheriſh and nouriſh it till nature has framed the child, and brought it to perfection, and 3dly, it worketh ſtrenuouſly in ſending forth the birth, when the time of its remaining there is expired, at which time it ſtretcheth forth itſelf in a very wonderful manner.

The uſe of the preparing veſſels is to convey the blood to the teſticles, (part of which is ſpent in the nouriſhment of them, and the production of thoſe little bladders, in all things reſembling eggs) through which the preparing veſſels run, and are obliterated in them; that is done by the arteries; and as for the veins

their office is to bring back what blood remains from the aforesaid uſes. Theſe veſſels are more ſhort in women than in men, by reaſon of their nearneſs to the ſtones; which defect is ſufficiently repaired by the many windings and turnings to which they are ſubject, dividing themſelves in the middle way into two branches, though not of an equal bigneſs, for one is greater than the other.

The ſtones in women are of that uſe that if they are defective, the work of generation ceaſes; for though (according to the modern opinion) thoſe little bladders which are in their outward ſuperficies, contain nothing of ſeed, yet they contain ſeveral eggs (uncertain as to their number, though generally about twenty) one of which eggs being impregnated by the ſpirituous part of man's ſeed in the act of coition, deſcends into the womb, and in the time nature has appointed, becomes a living child.

Having thus given an account of the uſe and action of the genitals in the act of generation, I ſhall now ſhew you the opinion of both the ancients and moderns touching the woman's contributing ſeed for the formation of the child, as well as the man's; which was the opinion of the ancients, but is denied by our modern authors.

Though it is apparent, ſay the ancients, that the ſeed of a man is the principal efficient, and beginning of action, motion, and generation, yet that the woman affords ſeed, and contributes to the procreation of the child, is evident, from hence, that the woman has ſeminal veſſels, which had been given her in vain, had ſhe wanted ſeminal excreſſence: but ſince nature doth nothing in vain, it muſt be granted they were made for the uſe of ſeed and procreation, and fixed in their proper places to operate and contribute virtue and efficacy to the ſeed; and this, ſay they, is farther proved from hence, that if women at the years of maturity uſe not copulation to eject the ſeed, they often fall into ſtrange diſeaſes, as appears by young women and virgins; and alſo it is apparent, that women are never better pleaſed than when they are often ſatisfied this way, which pleaſure and delight, ſay they, is double in women to what it is in men, for as the delight of men conſiſts chiefly in the ejection of the ſeed, ſo women are delighted both by the ejection of their own, and the reception of the man's.

But againſt all this, our modern authors affirm, that the ancients were very erroneous; for as much as teſticles in women do not afford ſeed, but are two eggs, like thoſe of fowls; neither have they any ſuch office as thoſe of men but are indeed an ovarium, a receptacle for eggs; wherein theſe eggs are nouriſhed by the ſanguinary veſſels diſperſed through them; and from thence, one or more (as they are fœcundated by the man's ſeed) are conveyed into the womb by the oviducts; and the truth of this, ſay they, is ſo plain that if you boil them, they will have the ſame taſte, color and conſiſtency, with the taſte of birds' eggs: and if any object, that they have no ſhells that ſignifies nothing, for the eggs of fowls, while in the ovary, nay after they have fallen into the uterus have no ſhell; and though they have one when they are laid, yet it is no more than a fence, which na-

ture hath provided for them againſt outward injuries, they being hatched without the body; but thoſe of women being hatched within the body; have no need of any other fence than the womb to ſecure them. And they further ſay, there are in the generation of the fœtus, two principles, active and paſſive; the active is the man's ſeed elaborated in the teſticles out of the arterial blood and animal ſpirits; the paſſive principle is the ovum or egg impregnated by the man's ſeed; for to ſay that a woman has true ſeed, is, they ſay, erroneous. But the manner of conception is this; The moſt ſpirituous part of man's ſeed, in the act of copulation, reaches up to the ovarium or teſticles of the woman (which contain divers eggs, ſometimes more, ſometimes fewer) impregnates one of them, which being conveyed by the oviducts to the bottom of the womb, preſently begins to ſwell bigger and bigger, and drinks in the moiſture that is plentifully ſent thither after the ſame manner that ſeeds in the ground ſuck the fertile moiſture thereof to make them ſprout.

But notwithſtanding all this, Culpepper, in his directory for Midwives, poſitively affirms, that the teſticles or ſtones of a woman are for generation of ſeed, and for to deny this, is both againſt reaſon and experience I will not undertake to determine the controverſy, but leave the reader to judge for himſelf, and proceed (having according to the cuſtom of Britain, given women the preference) to deſcribe the organs of generation in man.

CHAP. IV.

Of the Inſtruments or Organs of Generation in Man.

THE penis or yard of the man (being the principal inſtrument of generation) is called ſo, from its hanging without the belly; and it conſiſts of ſkin, tendons, veins, arteries, ſinews and great ligaments, and is long and round: it is ordained by nature both for the paſſage of the urine, and the conveying of the ſeed into the matrix. It hath ſome parts common with it to the reſt of the body, as the ſkin and fleſhy membrane; and ſome parts it has peculiar to itſelf, as the two nervous bodies; the ſeptum, the urethra, or glans, the four muſcles, and veſſels.

The ſkin which the Latins call *cutis*, is full of pores, through which the ſweat and fuliginous or ſooty black vapors of the third concoction (which concocts the blood into fleſh) paſs out: The pores are very many and thick, but hardly viſible to the eye, and when the yard ſtands not, it is flaggy, but when it ſtands it is ſtiff: This ſkin is very ſenſible, becauſe the nerves concur to make up its being.

The carnis membrane or fleſhy ſkin, ſo called, becauſe it lieth between the fleſh, and paſſeth in other parts of the body, underneath the fat, and ſticks cloſe to the muſcles, not that there is any fat in the yard, only a few ſuperficial veins and arteries paſs between the former ſkin and this, which, when the yard ſtands, are viſible to the eye. Theſe are the parts common both to the yard and the reſt of the body. Now, I will ſpeak of the parts peculiar to itſelf, and firſt, of the nervous bodies.

The two nervous bodies are ſurrounded with a thick, white nervous membrane but are ſpungy within and full of black blood, the ſpungy ſubſtance of the inward part of it ſeems to be

woven together like a net, and consists of innumerable veins and arteries; the black blood contained therein is full of spirits, and the desire of copulation adds heat to them, which causeth the yard to stand; and the hollow spungy intermixture, or weaving was ordained on purpose to hold the heat or veneral spirits, that the yard may not fail before it has done its work; these two side ligaments of the yard, where they are thick and round, spring from the lower part of the share bone, and, at their beginning are separated the one from the other, and resemble a pair of horns, or the letter Y, where the urethra, that is the common channel of urine and seed passeth between them.

The septum is in substance white, nervous and sinewy, and its office is to uphold the two side ligaments and the urethra.

The urethra is sinewy, thick, soft, and loose, like to that of the side ligaments before mentioned. It begins at the neck of the bladder, and so passeth to the glans; in the beginning of it are three holes: one large in the midst, which receives the urine into it, the other two are smaller, which are sent by each seminal vessel to it, by which it receives seed.

The muscles of the yard are four, two on each side. A muscle is an instrument of voluntary motion without which no part of the body can move itself; it consists of fibrous flesh to make up its body of nerves for its sense, of veins for its nourishment, of arteries for its vital heat, of a membrane or skin, to kint together, and so distinguish one muscle from another; one of each side is shorter and thicker than the other, and their use to erect the yard and make it stand, and are called erectors; the others are longer and smaller, and their office is to dilate and open the lower part of the urethra, or channel both for making water and voiding the seed; and these are called accelerators.

The glans, in the extreme part of the yard is soft, and of an exquisite feeling, by reason of the thinness of the skin, wherewith it is covered. It is covered with the preputium, or foreskin, which the Jews were commanded to cut off on the eighth day. The skin in some men covers the top of the yard quite close, but in others not, which moving up and down in the act of copulation brings pleasure both to the man and woman. The ligament by which the præputium is tied to the glans is called frœnum or the bridle.

The vessels of the yard are veins, nerves, and arteries Some veins and arteries pass by the skin, and are visible to the eye; others pass by the inward part of the yard, the arteries being dispersed through the body of the yard exceeding the dispersion of the veins, for the right artery is dispersed to the left side, it hath also two nerves, the lesser of which is bestowed on the greater upon the muscles and body of the yard.

Having thus described the yard, I shall now speak of the stones or testicles, so called because they testify that he is a man. Their number every body knows, is two; their substance is white, soft and spungy: Their form is oval, but in some they are bigger than others; each stone hath a muscle, because they pull up the stones in the act of copulation, that so the vessels being slackened, may the better void the seed.

The uſe of the ſtones is to convert blood and ſpirit into ſeed for the procreation of man, and to add ſtrength, heat and courage to man; as appears from eunuchs, who have loſt their ſtones, who are neither ſo hot, ſtrong nor valiant as other men.

To the upper part of the teſticles are fixed the epidimes, from whence ariſes *vaſa deferentia*, or *ejaculatoria*, which, when they come to the neck of the bladder, depoſit the ſeed in *viſculas ſeminales*, which are two, each like a bunch of grapes, which admit the ſeed into the urethra in the act of copulation. As for the preparing veſſels, which prepare the blood and vital ſpirits and carry them to the teſticles, where they are elaborated into ſeed I have ſpoken of them in the chapter of the genitals of women; and ſince thy differ ſo little from thoſe of men, I ſhall not need to repeat what I have ſaid before.

CHAP V.

Of Conception: and how a Woman may know whether ſhe hath conceived or not, and whether a Male or Female.

THE natural inſtinct implanted in men and women to propagate their own ſpecies, puts them upon making uſe of thoſe ways nature has ordained for that end, which after they have uſed, the woman many times, through ignorance of her having conceived, or want of that due care ſhe ought to take is little better than a murderer of her own child, though ſhe intends it not; for, after conception, finding herſelf not well, and not knowing what the matter is, ſhe runs to a doctor, and enquries of him, and he knowing nothing but what ſhe tells him, gives her a ſtrong cathartical potion, which deſtroys the conception. And ſome there are, that out of a fooliſh baſhful coyneſs, though they know they have conceived, yet will not confeſs it, that ſo they might be inſtructed to order themſelves accordingly: Thoſe that are ſo coy may in time learn to be wiſer; and for the ſake of thoſe that are ignorant, I ſhall ſet down the ſigns of conception, that women may thereby know whether they have conceived or not.

Signs of Conception.

If under the eye the vein be ſwelled, that is under the lower eyeled, the veins in the eyes appearing clearly, and the eye ſomething diſcolored; if ſhe has not her terms upon her, nor watched the night before, you may certainly conclude her to be with child. This appears moſt plainly juſt upon her conception, and the firſt two months I never knew this ſign to fail.

Keep the urine of the woman cloſe in a glaſs three days, and then ſtrain it through a fine linen cloth; if you find ſmall living creatures in it, ſhe hath moſt aſſuredly conceived, for, the urine, which was before part of her own ſubſtance, will be generative as well as its miſtreſs.

A coldneſs and chillineſs of the outward parts after copulation, the heat being retired to make conception The tops of the nipples look redder than formerly. The veins of the breaſt are more clearly ſeen than they were wont to be. The body is weakened and the face diſcolored. The belly waxeth very fat, becauſe the womb cloſeth itſelf together, to nouriſh and cheriſh the ſeed. If cold water be drunk, a coldneſs is felt in the breaſts.

Loſs of appetite to victuals, ſour belchings and exceeding weakneſs of ſtomach The breaſts begin to ſwell and wax hard, not without pain and foreneſs Wringing or griping pains, like the cramp, happen in the belly about the navel. Divers appetites and longings are engendered. The veins of the eyes are clearly ſeen, and the eyes ſeem ſomething diſcolored, as a looking glaſs will ſhew you This is an infallible ſign. The excrements of the guts are voided painfully, becauſe the womb ſwelling thruſteth the right gut together. Take a green nettle, and put it into the urine of the woman; cover it cloſe, and let it remain a whole night: if the woman be with child, it will be full of red ſpots on the morrow; if ſhe be not, it will be blackiſh. There are ſeveral other rules of this nature, but theſe are the beſt, and ſome of them ſeldom fail. Now becauſe many are mighty deſirous to know whether they be with child of a male or female, I will, in the next place, lay down ſome rules whereby they may make a judgment in that caſe.

Signs of a Male child.

A woman breads a boy with leſs pain than a girl, and does not carry her burden ſo heavily, but is more nimble in ſtirring. The child is firſt felt by her on the right ſide, for the ancients are of opinion, that male children lie on the right ſide of the womb. The woman when ſhe riſeth up from a chair, doth readier ſtay herſelf upon her right hand than on her left. The belly lies rounder and higher than when it is a female. The right breaſt is more plump, and harder than the left, and the right nipple. The color of a woman is more clear, and not ſo ſwarthy as when ſhe conceives a girl. The contrary to theſe are ſigns of the conception of a female, and therefore it is needleſs to ſet them down. But I will add the following; they have been the reſult of my own experience, and which I never knew fail. If the circle under the woman's eyes, which is of a wan blue color, be more apparent under the right eye, and the veins moſt apparent in her right eye, and then moſt diſſolved, ſhe is with child of a boy: if the mark be moſt apparent in her left eye, ſhe is with child of a girl. Again, let her milk a drop of her milk in a baſon of fair water: If it ſinks to the bottom, as it drops in, round in a drop, it is a girl ſhe is with child of, but if it be a boy, it will ſpread and ſwim at the top. This I have often tried, and it never failed. But before I conclude this chapter, I ſhall lay down ſome rules that women ought to obſerve in order to conception: and likewiſe, what they ſhould do after conception, to prevent miſcarriage.

What Women ought to obſerve in order to conception.

Women that are deſirous to have children, in order thereunto, muſt give themſelves moderate exerciſe; for idleneſs and want of exerciſe are very great enemies to generation work; and thoſe that obſerve it, ſhall find that your city dames, who live high and do nothing, ſeldom have children, or if they have they ſeldom live; whereas the poor women who accuſtom themſelves to labor, have many children, and thoſe luſty. Nor need we wonder at it, if we conſider the benefit that comes by moderate exerciſe and labor, for it opens the pores, quickens the

ſpirits, ſtirs up the natural heat, ſtrengthens the body, ſenſes, and ſpirits, and comforts the limbs, and helps nature in her exerciſes, of which the procreation of children is none of the leaſt.

Next to moderate exerciſe, ſhe muſt avoid all manner of diſcontent, and the occaſion of it; for diſcontent is a great enemy to conception, but contentment and quietneſs of mind are as great friends to it; for content dilates the heart and arteries, whereby the vital blood or ſpirits is ſufficiently diſtributed throughout the body: and thence ariſe ſuch affections as pleaſe, recreate, and refreſh the nature of man, as, hope, joy, love, gladneſs and mirth. Nor does it only comfort and ſtrengthen the body, but alſo the operations and imaginations of the mind; for all agree, that the imagination of the mother works forcibly upon the conception of the child; and therefore women ought to take great care that their imagination be pure and clear, that their children may be well formed.

Another thing that women ought to do in order to conception is to keep the womb in good order; and to that end, ſee that the menſtrues come down as they ought to do; if they are diſcolored, then they are out of order, but if the blood come down pure then the woman will be very prone to conceive with child, eſpecially if they uſe copulation a day or two after the monthly terms are ſtayed.

Another thing a woman ought to obſerve that would conceive is, that ſhe uſe not the act of copulation too often, for ſatiety gluts the womb and makes it unfit to do its office. There are two things demonſtrate this: one is, that the common whores (who often uſe copulation) have ſeldom any children, the other is, that thoſe women whoſe huſbands have been long abſent, after they come again conceive very quickly.

And then let the time of copulation be convenient, that there may be no fear of ſurpriſe, for fear hinders conception.

And let the time of copulation be natural, and not ſtirred up by provocatives; and obſerve alſo, that the greater the woman's deſire of copulation is, the more ſubject ſhe is to conceive.

A loadſtone carried about a woman cauſeth not only conception but concord between man and wife.

Things neceſſary for women to obſerve after Conception.

Women are very ſubject to miſcarriages in the two firſt months after conception, becauſe then the ligaments are weak and ſoon broken. To prevent which, let the woman every morning drink a good draught of ſage ale, and it will do her abundance of good.

But if ſigns of abortion or miſcarriage appear, let her lay a toaſt dipped in tent, (in caſe muſkadel cannot be gotten) to her navel, for this is very good; or let her take a little garden tanſey, and having bruiſed it, ſprinkle it with muſkadel, and apply it to the navel, and ſhe will find it much better. Alſo tanſey infuſed in ale, like ſage ale, and a draught drunk every morning is moſt excellent for ſuch women as are ſubject to miſcarriages, alſo take juice of tanſey clarify it, and boil it up into a ſyrup, with twice its weight in ſugar, and let a woman take a ſpoonful

or two of it, in such cases it will be an excellent preservative against miscarriages.

Also let the air be temperate, sleep moderate, avoid watching and immoderate exercise, with disturbing passions, loud clamors, and filthy smells? and let her abstain from all things which may provoke either the urine or the courses, and also from all sharp and windy meats, and let a moderate diet be observed, If the excrements of the guts be retained, lenefy the belly with clysters made of the decoction of mallows, violets with sugar and common oil; or make broth of burrage, bugloss, beets, mallows, and take therein a little manna: but on the contrary, if she be troubled with a loosness of the belly, let it not be stopped without the judgment of a physician, for all uterine fluxes have a malignant quality in them, which must be evacuated and removed before the flux is stayed.

CHAP. VI.

Of Barrenness with the remedies against it, and the Signs of Insufficiency both in Men and Women.

HAVING, in the foregoing chapter, treated of conception, with the signs, and given directions to the women both before and after conception, I will in this chapter treat of the opposite to conception, to wit, barrenness

If it is a blessing to have children, then certainly barrenness must be a great curse; And indeed in holy writ it is so accounted, and therefore, some are threatened that they shall die childless: and the wife of Jacob, even his beloved Rachel, cried out to him "Give me children or else I die." Indeed it was a passionate expression, and fell out according to her words, for she had children, and died in childbed But to the subject in hand, which is barrenness.

Barrenness is threefold, to wit, either natural, accidental or against nature.

Natural barrenness is when a woman is barren, though the instruments of generation are perfect both in herself and her husband, and no preposterous and diabolical course used to cause it, and neither age nor disease, nor any natural defect hindering, and yet the woman remains naturally barren, and conceives not.

Now this may proceed from a natural cause; for if the man and woman be of one complexion, they seldom have children, and the reason is clear, for, the universal course of nature being formed by the Almighty of a composition of contraries, cannot be increased by a composition of likes, and therefore, if the constitution of the woman be hot and dry, as well as that of the man, there can be no conception, and if on the contrary, the man should be of a cold and moist constitution, as well as the woman, the effect would be the same, and this barrenness is purely natural. The only way to help it is, for people before they marry to observe each others constitutions and complexions if they design to have children; if their complexion or constitutions be alike, they are not fit to come together; for discordant natures make the only harmony in the works of generation.

Another natural cauſe of barrenneſs, is want of love between man and wife, love is that vital principal that ought to animate each organ in the act of generation, or elſe it will be ſpiritleſs and dull, for, if their hearts be not united in love, how ſhould their ſeed unite to cauſe conception? And this is ſufficiently evidenced, in that there never follows a conception upon a rape, therefore if men and women deſign to have children, let them take care to live, ſo that their hearts as well as their bodies may be united, or elſe they miſs of their expectations.

A third cauſe of natural barrenneſs is the letting of virgins' blood in the arm before their natural courſes are come down, which is uſually in the fourteenth and ſixteenth years of their age, ſometimes perhaps, before the thirteenth, but never before the twelfth. And becauſe uſually they are out of order and indiſpoſed before their purgations come down, their parents run to a doctor to know what's the matter, and he ſtraight preſcribes opening a vein in the arm, ſeeing it was fullneſs of blood which was the cauſe offending, and this makes her well at preſent, and when the young virgin happens to be in the ſame diſorder again the mother ſtraight runs to the ſurgeon, uſes the ſame remedy, and by theſe means the blood is diverted from its proper channel, ſo that it comes not down to the womb, as in other women, whereby the womb dries up, and the woman is forever berren. The way to prevent this, is to let no virgin blood in the arm before her courſes come well down, but, if there be occaſion, in the foot, for that will bring the blood downward, and by that means provoke the menſtrues to come down.

Another cauſe of natural barrenneſs is, the debility of perſons in copulation: if perſons perform not that act with all the heat and ardor that nature requires, they may as well let it alone, and expect to have children without it; for frigidity and coldneſs never produce conception. Of the cure of this we will ſpeak, after I have ſpoken of accidental barrenneſs, which is what is occaſioned by ſome morbific matter or infirmity upon the body, either of the man or woman, which being removed they become fruitful. And hence (as I have before noticed) the firſt and great law of the creation was to increaſe and multiply, and barrenneſs is the direct oppoſition of that law, and fruſtrates the end of our creation: and it is ſo great an affliction to many to be without children, as to cauſe man and wife to have hard thoughts of one another, each party thinking the cauſe is not in them; I ſhall here, for the ſatisfaction of all well meaning people, ſet down the ſigns and cauſes of inſufficiency both in men and women, premiſing this firſt that when people have no children, they muſt not preſently blame either party, for neither may be in the fault, but perhaps God ſees it not good (for reaſons beſt known to himſelf) to give them any: of which we have divers inſtances both in ſacred and profane hiſtory: and though the Almighty in the production of nature, works by natural means, yet where he withholds his bleſſing, natural means are ineffectual, for, it is his bleſſing, that it is the power and energy by which nature brings her productions forth.

Signs and Causes of insufficiency in Men.

One cause may be some viciousness in the yard; as if the same be crooked, or any ligaments thereof distorted or broken, whereby the ways and passage, through which the seed should flow, come to be stopped or vitiated.

Another cause may be too much weakness of the yard and tenderness thereof. so that it is not strongly enough erected to inject the seed into the womb, for the strength and stiffness of the yard very much conduce to conception, by reason of the forcible injection of the seed.

Also if the stones have received any hurt, so that they cannot exercise their proper gift in producing seed; or, if they are oppressed with any inflamation or tumor, wound or ulcer, drawn up within the belly, and not appearing outwardly, these are signs of insufficiency and causes of barrenness.

Also, a man may be barren, by reason of the defect of his seed: as, First. If he cast forth no seed at all, or less in substance than is needful: or Secondly, if the seed be viscous, or unfit for generation, as, on the one side, it happens in bodies that are gross and fat, the matter of it being defective: and on the other side, too much leanness, or continual wasting or consumption of the body destroys the seed, nature turning all the matter and substance thereof into nutriment of the body.

Too frequent copulation is also one great cause of barrenness in men for it attracteth the seminal moisture from the stones before it is sufficiently prepared and concocted, so if any one by daily copulation do exhaust and draw out all the moisture of his seed, then do the stones draw the moist humors from the superior veins unto themselves, and so having but little blood in them, they are forced of necessity to cast it out raw and unconcocted; and thus the stones, violently deprived of the moisture of their veins, attract the same from the other superior veins, and the superior veins, from all the other parts of the body for their proper nourishment, thereby depriving the body of its vital spirits; and therefore no wonder that those who use immoderate copulation are very weak in their bodies, seeing their whole body is thereby deprived of its best and purest blood, and also of the vital spirits, insomuch that many who have been too much addicted to that pleasure have killed themselves in the act; and therefore, it is no wonder if such unconcocted and undigested seed be unfit for generation.

Gluttony and drunkenness, and other excesses, do also much hinder men from fruitfulness, and make them unfit for generation. But amongst other causes of barrenness in men, this also is one that makes them barren, and almost of the nature of eunuchs, and that is the incision, or cutting of the veins behind the ears, which in case of distempers is oftentimes done, for according to the opinion of most physicians and anatomists, the seed flows from the brain by those veins behind the ears more than from any other part of the body: from whence it is very probable, the transmission of the seed is hindered by cutting off the veins behind the ears, so that it cannot descend at all to the

teſticles, or comes thither very crude and raw. And thus much for ſigns of barrenneſs in men.

Signs and Cauſes of Inſufficiency, or Barrenneſs in Women.

Although there are many cauſes of barrenneſs in women, yet the chief and principal are internal, reſpecting either the privy parts of the womb, the ſeed or the menſtruous blood.

Therefore Hippocrates ſaith (ſpeaking of either the eaſy or difficult conception in women) the firſt conſideration ought to be had of their ſpecies, for little women are more apt to conceive than great, ſlender than groſs, white and fair than ruddy and high colored, black than pale and wan; thoſe which have their veins conſpicuous are more apt than others; but to be very fleſhy is evil; to have great ſwelling breaſts is good.

The next thing to be conſidered is, the monthly purgations, whether they have them duly every month; if they flow plentifully, are of a good color, whether they have them equally every month; for ſo they ought to be.

Then the womb or place of conception is to be conſidered; it ought to be clean and ſound, dry and ſoft, not retracted, nor drawn up, nor prone nor deſcending downward, the mouth thereof turned away, nor too cloſe ſhut. But to be more particular.

The firſt parts to be ſpoken of are the Pudenda, or privities, and the womb; when theſe are ſhut and encloſed either by nature or againſt nature, ſuch women are called *imperforate*; for in ſome women the mouth of the womb continues compreſſed, or cloſed up, from the time of their birth, until the coming down of their courſes; and then of a ſudden, when their terms preſs forward to purgation, they are moleſted with great and unuſual pains: Some of theſe break of their own accord, others are diſſected and opened by a phyſician; others never break at all and then it brings death.

All theſe Aetius particularly handles, ſhewing that the womb is ſhut three manner of ways, which hinders conception; firſt, when the lips of the pudenda grow or cleave together; ſecond, when there are certain membranes growing in the middle part of the matrix within;—third, when (though the lips and boſom of the Pudenda may appear fair and open) the mouth of the womb may be quite ſhut up: all which are occaſions of barrenneſs, in that they hinder both the uſe of man, the monthly courſes, and conception.

But among all the cauſes of barrenneſs in women, the greateſt is in the womb, which is the field of generation: and, if the field be corrupted, it is in vain to expect any fruit, let it be ever ſo well ſown.—for it may be unfit for generation, by reaſon of many diſtempers to which it is ſubject, as for inſtance, overmuch heat and overmuch cold, for women whoſe wombs are too thick and cold cannot conceive, becauſe coldneſs extinguiſheth the natural heat of the human ſeed.

Immoderate moiſture of the womb alſo deſtroys the ſeed of man, and makes it ineffectual, as corn ſown in fens and marſhes; and ſo doth overmuch dryneſs of the womb, ſo that the ſeed periſheth for want of nutriment.

Immoderate heat of the womb is alſo a cauſe of barrenneſs; for it ſcorcheth up the ſeed, as corn ſown in the drought of ſummer: for immoderate heat hurts all the parts of the body, and no conception can live to be nouriſhed in that woman.

Alſo when unnatural humors are engendered; as too much phlegm tympanies, wind, water, worms, or any ſuch evil humors abounding, contrary to nature; it cauſes barrenneſs, as does alſo the terms not coming down in due order, as I have already ſaid.

A woman may alſo have other accidental cauſes of barrenneſs as ſudden frights, anger, fear, grief, and perturbation of the mind; too violent exerciſes, as leaping, dancing, running, after copulation, and the like. But I will now add ſome ſigns whereby we may know thoſe things.

If the cauſe of barrenneſs be in the man through overmuch heat in his ſeed, the woman may eaſily feel that in receiving it.

If the nature of the womb be too hot, and ſo unfit for conception, it will appear by having her terms very little, and their color inclining to yellowneſs; ſhe is alſo very haſty, choleric, and crafty, her pulſe beats, very ſwift, and ſhe is very deſirous of copulation.

If you would know whether the fault lies in the man or woman, ſprinkle the man's urine upon one lettuce leaf, and the woman's upon another, and that which dries away firſt is unfruitful. Alſo take five wheat corns, and ſeven beans, put them into an earthen pot, and let the party make water therein; let this ſtand ſeven days, and if in that time they begin to ſprout, then the party is fruitful, but if they ſprout not, then the party is barren, whether it be man or woman. This is a certain ſign.

There are ſome that make this experiment of a woman's fruitfulneſs: Take myrrh, red ſtorax, and ſome ſuch odoriferous things, and make a perfume of it, which let the woman receive into the neck of the womb through a funnel; if ſhe feel the ſmoke aſcend through the body to her noſe, then ſhe is fruitful, otherwiſe barren.

Some alſo take garlic and beat it, let the woman lie on her back upon it, and if ſhe feels the ſcent thereof aſcend to her noſe, it is a ſign of fruitfulneſs.

Culpeper and others, give a great deal of credit to the following experiment.

Take a handful of barley and ſteep half of it in the urine of a man, and the other half in the urine of a woman, for the ſpace of twenty four hours, and then take it out, and ſet the woman's by itſelf; and the man's by itſelf; ſet it in a flowerpot, or ſome other thing where you may keep it dry; then water the man's every morning with his own urine, and the woman's with her's, and that which grows firſt is the moſt fruitful, and if one grow not at all that party is naturally barren.

But now having ſpoke enough of the diſeaſe, it is high time to aſſign the cure.

If barrenneſs proceeds from ſtoppage of the menſes, let the woman ſweat, for that opens the part, and the beſt way to ſweat is in a hothouſe. Then let the womb be ſtrengthened by drink-

ing a draught of white wine, wherein a handful of ſtinking arrack, firſt bruiſed, has been boiled, for by a certain magnetic virtue, it ſtrengthens the womb, and by a ſympathetic quality, removes any diſeaſe thereof. To which add alſo a handful of vervain, which is very good to ſtrengthen both the womb and the head, which are commonly afflicted together by a ſympathy.

Having uſed this two or three days, if they come not down, take of calamint, pennyroyal, thyme, betony, dittany, burnet, feverfew, mogwort, ſage, piony roots, juniper berries, half a handful of theſe, or ſo many of them as can be gotten; let all theſe be boiled in beer, and drank for her ordinary drink.

Take one part of gentian, two parts of centaury, diſtil them with ale in an alembick, after you have bruiſed the gentian roots, and infuſed them well. This water is an admirable remedy to provoke the terms. But if you have not this water in readineſs, take a dram of centaury, and half a dram of gentian roots, beat them to powder, and take in the morning in white wine, or elſe take a handful of centaury, and half a handful of gentian roots bruiſed; boil it in poſſet drink, and drink a draught of it at night going to bed. Seed of wild navew beaten to powder, and a dram of it taken in the morning in white wine, is alſo very good. But if this doth not do, you muſt let blood in the legs. And be ſure you adminiſter your medicine a little before the full of the moon, or between the new and full moon, but by no means in the wane of the moon; if you do you will find them ineffectual.

If barrenneſs proceeds from the overflowing of the menſtrues, then ſtrengthen the womb, as you were taught before, and afterwards anoint the reins of the back with oil of roſes, oil of myrtles, or oil of quinces, every night, and then wrap a piece of white baize about your reins, the cotton ſide next your ſkin, and keep the ſame always to it. But above all, I commend this medicine to you; take comfrey leaves or roots, clowns, wound wort, of each one handful, bruiſe them well, and boil them in ale, and drink a good draught of it every now and then: or take caſſia, cinnamon, lignea, opium, of each two drams: myrrh, white pepper, galbanum, of each one dram; diſſolve the gum and opium in white wine, beat the reſt into powder; then make them into pills, by mixing them together exactly, and let the patient take two pills every night going to bed; but let not both the pills exceed fifteen grains.

If barrenneſs proceed from a flux of the womb, the cure muſt be according to the cauſe producing it, or which the flux proceeds from, which may be know by its ſigns; for a flux of the womb being a continual diſtillation from it for a long time together, the color of what is voided ſhews what humor it is that it offends; in ſome it is red, and that proceeds from blood putrefied; and in ſome it is yellow, and that denotes choler: in others white and pale, and that denotes phlegm. If pure blood comes out, as if a vein was opened, ſome corroſion or knawing of the womb is to be feared. All of them are known by theſe ſigns.

The place of conception is continually moiſt with the humors, the place is colored, the party loathes meats, and breathes with

difficulty ; the eyes are much ſwollen, which is ſometimes with pain. If the offending humor be pure blood, then you muſt let blood in the arm, and the cephalic vein is fitteſt to draw back the blood, and then let the juice of plantain and comfrey be injected into the womb. If phlegm be the cauſe, let cinnamon be the ſpice uſed in all her meats and drinks ; and let her take a little venice treacle or mithridate every morning ; let her boil burnet, mugwort, featherfew and vervain in all broths. Alſo half a dram of myrrh taken every morning is an excellent remedy againſt this malady. If choler be the cauſe, let her take burrage, bugloſs, red roſes, endive, and ſuccory roots, lettuce and white popy ſeed, of each a handful ; boil theſe in white wine till one half is waſted ; let her drink half a pint every morning ; to which half pint add ſyrup of peach flowers and ſyrup of chickory, of each one ounce, with a little rhubarb ; and this will gently purge her. If it proceed from putrefied blood, let her blood in the foot, and then ſtrengthen the womb, as I have directed, in ſtopping the menſtrues.

If barrenneſs be occaſioned by the falling out of the womb, as ſometimes happens, let her apply ſweet ſcents to her noſe, ſuch as civit, galbanum, ſtyrax calamitis, wood of aloes, and ſuch other things as are of that nature, and let her lay ſtinking things to the womb, ſuch as aſafœtida, oil of amber, or the ſmoke of her own hair burnt ; for this is certain that the womb flies from all ſtinking, and applies to all ſweet things. But the moſt infallible cure in this caſe is this ; take a common burdock leaf, (which you may keep dry if you pleaſe all the year) apply this to her head, and it will draw the womb downward. Bur ſeed beaten into powder, has alſo the like virtue ; for by a magnetic power it draws the womb which way you pleaſe, according as it is applied.

If barrenneſs proceed from a hot cauſe, let the party take whey and clarify it, then boil plantain leaves and roots in it, and drink it for her ordinary drink. Let her alſo inject the juice of plantain into the womb with a ſyringe : If it be in the winter, when you cannot get the juice, make a ſtrong decoction of the roots and leaves in water, and inject that up with a ſyringe : but let it be blood warm, and you will find this medicine of great efficacy. And further, to take away barrenneſs proceeding from hot cauſes, take often conſerve of roſes, cold lozenges made of tragacanth, the confection of tricantelia, and uſe to ſmell camphire, roſe water, and ſaunders. It is alſo good to bleed the baſilica, or liver vein, and then take this purge ; take electuarum de epithimo de ſucco roſarum, of each two drams and a half, clarified whey four ounces ; mix them well together and take it in the morning faſting : ſleep after it about an hour and a half, and faſt four hours after it ; and about an hour before you eat any thing drink a good draught of whey. Alſo, take lily water four ounces ; mardrogar water one ounce, ſaffron half a ſcruple ; beat the ſaffron to powder, and mix it with the waters and drink them warm in the morning ; uſe this eight days together.

Here followeth ſome excellent Remedies againſt Barrenneſs, and to cauſe Fruitfulneſs.

TAKE broom flowers, ſmallage, parſley ſeed, cummin, mugwort featherfew, of each half a ſcruple: aloes half an ounce; India ſalt, ſaffron, of each half a dram, beat and mix well together, and put it into five ounces of featherfew water warm, ſtop it cloſe, and let it ſtand and dry in a warm place: and thus do two or three times one after another; then make each dram into ſix pills, and take one of them every other night before ſupper.

A confection very good againſt barrenneſs. Take piſrachia, pingles, eringoes, of each half an ounce: ſaffron one dram, lignum aloes, gallingale, mace, caryophilla, balm flowers, red and white behen, of each four ſcruples; ſhaven ivory, caſſia bar, of each two ſcruples; ſyrup of confected ginger twelve ounces; white ſugar ſix ounces; decoct all theſe well together, then put to it of muſk and amber, of each half a ſcruple; take thereof the quantity of a nutmeg three times a day; in the morning and an hour before noon, and an hour after ſupper.

But if the cauſe of barrenneſs either in man or woman, be through the ſcarcity or diminution of the natural ſeed, then ſuch things are to be taken as do increaſe the ſeed, and incite or ſtir up venery and farther conception; which I ſhall here ſet down, and ſo conclude this chapter of barrenneſs.

For this, yellow rape ſeed baked in bread is very good; alſo young fat fleſh, not too much ſalted; alſo ſaffron, the tails of ſtincus, and long pepper prepared in wine: let ſuch perſons eſchew alſo ſour, ſharp, doughy and ſlimy meats, long ſleep after meat, ſurfeiting and drunkenneſs, as much as they can; keep themſelves from ſorrow, grief, vexation and care.

Theſe things following, increaſe natural ſeed and ſtir up to venery, and recover the ſeed again when loſt, viz. eggs, milk, rice boiled in milk; ſparrow's brains, fleſh, bones and all; the ſtones and pizzles of bulls, bucks, rams, and boars; alſo cock ſtones, lamb ſtones, partridges, quail's and pheaſant's eggs; and this is an undeniable aphoriſm, that whatſoever any creature is addicted unto, they move or incite the man or woman that eats them to the like: and therefore partridges, quails, ſparrows, &c. being extremely addicted to venery, they work the ſame effect in thoſe men and women that eat them. Alſo to take notice, that in what part of the body the faculty, which you would ſtrengthen lies, take the ſame part of the body of another creature in whom the faculty is ſtrong for a medicine. As, for inſtance, the procreative faculty lies in the teſticles; therefore cock ſtones, lamb ſtones, &c. are proper to ſtir up venery. I will alſo give you another general rule; creatures that are fruitful, being eaten make them fruitful that eat them, ſuch as lobſters, prawns, pigeons, &c.

Authors have ſet down ſeveral ways for the prevention of barrenneſs; to carry the herb St. John's Wort about them; which for that cauſe was called by the ancients Fuga Demonum, or the devil driver. Alſo to carry a load ſtone about them, was accounted a great preſervative: as likewiſe a plaiſter of St.

John's Wort laid to the reins. And laſtly, the heart of a turtle dove carried about them; but theſe are only for prevention. But you will ſay, how if prevention come too late, and the miſchief be done already, and the man cannot give his due benevolence? muſt the poor man remain helpleſs, and the good woman go without what ſhe is married for? No, there is help even in this caſe alſo; and the cure is eaſy, which though the reader may ſcruple to believe, yet it has been tried and found effectual; it is no more than this, let the man only make water through the wife's wedding ring and the enchantment will be broke: and thus one piece of witchcraft is made to drive out another. But I will here put a period to this chapter.

Of the pleaſure and advantage of Marriages; with the unequa Matches, and ruinous effect of unlawful Love.

WE have hitherto been treating of the generation of man which is effected by man and woman in the action of coition or copulation. But this can be no ways lawfully done but by thoſe who are joined together in wedlock, according to the inſtitution of the Creator in paradiſe when he firſt brought man and woman together: Which being ſo it neceſſarily leads to treat of the pleaſure and advantage of a married life.

And ſure there is none that reaſonably queſtion the pleaſure and advantage of a married life that does but reflect upon its author, or the time and place of its inſtitution. The author and inſtitutor of marriage was no other than the great Lord of the whole univerſe, the Creator of heaven and earth, whoſe wiſdom is infinite, and therefore knew what was beſt for us, and whoſe goodneſs is equal to his wiſdom, and therefore inſtituted marriages, as what was beſt for the man whom he had but juſt created, and whom he looked upon as ſhort of that complete happineſs which he had deſigned him while he was alone and had not the help mate provided for him. The time of its inſtitution was no leſs remarkable; it was whilſt our firſt parents were cloathed with that virgin purity and innocence in which they were created; it was at a time wherein they had a bleſſed and uninterrupted converſe and communion with their great Creator; and were complete in all the perfections both of body and mind, being the lively image of him that created them; it was at a time when they could curiouſly ſurvey the ſeveral incomparable beauties and perfections of each other without ſin, and knew not what it was to luſt; it was at this happy time the Almighty divided Adam from himſelf, and of a crooked rib made an help mate for him; and by inſtituting marriage, united him unto himſelf again in Wedlock's ſacred bands. And this muſt needs ſpeak very highly in commendation of a married life.

But we have yet conſidered only the time; now let us conſider next what place it was wherein this marriage knot was firſt tied and we ſhall find the place was Paradiſe, a place formed by the great Creator for delight and pleaſure: and in our uſual dialect when we ſhould ſhew the higheſt ſatisfaction we take in, and give the greateſt commendation to a place, we can aſcend no higher than to affirm it was like a Paradiſe. There are many curious delicacies and delights to pleaſe the eye and charm the

ear in the gardens of princes and noblemen ; but paradiſe did certainly out do them all, the ſacred Scripture giving of its high encomiums. It was pleaſant as the gardens of God. It was in the midſt of Paradiſe, the centre of delight and happineſs, that Adam was unhappy while in a ſingle ſtate ; and therefore marriage may properly be ſtiled the Paradiſe of Paradiſe itſelf.

I will ſhew you the love of a good wife to her huſband in an illuſtrious example of a queen to our own nation.

King Edward the firſt making a voyage to Paleſtine, for the recovery of the Holy Land, in which expedition he was very victorious and ſucceſsful, took his queen along with him, who willingly accompanied him in all the dangers he expoſed himſelf to. It ſo happened that after ſeveral victories obtained, which made him both beloved and feared, he was wounded by a Turk, with an impoiſoned arrow, which all the king's phyſicians concluded mortal, unleſs ſome human creature would ſuck away the poiſonous blood out of the wound : at the ſame time declaring that it would be the death of thoſe that did it : upon this the thing was propoſed to ſeveral of the courtiers : but they all waved this piece of loyalty ; and as well as they pretended to love the king, yet loved their own lives better ; and therefore with a compliment declined it, which, when the noble queen perceived, and that the king muſt die for the want of ſuch a kind aſſiſtance, ſhe, with a braveneſs worthy of herſelf, declared ſhe was reſolved herſelf to undertake his cure, and venture her own life to ſave the king her huſband ; and ſo accordingly ſucked the poiſonous matter from the wound, and thereby ſaved the king : and, Heaven which did inſpire her with that generous reſolution, preſerved her too, as a reward for her great conjugal affection.

But that which renders marriage ſuch a mormo, and makes it look like ſuch a bugbear to our modern ſparks, are thoſe unhappy conſequences that too often attend it, for there are few but ſee what inauſpicious torches Hymen lights at every wedding ; what unlucky hands link in the wedding ring, nothing but fears and jars, and diſcontents or jealouſies, a curſe as cruel or elſe barrenneſs, are all the bleſſings which crown the genial bed. But it is not marriage that is to blame for this, the things are only the effects of forced and unequal matches ; when greedy parents, for the thirſt of gold, will match a daughter that is ſcarce ſeventeen to an old miſer that is above threeſcore, can any think they two can ever agree, whoſe inclinations are as different as the months of June and January ? this makes the woman (who ſtill wants a huſband, for the old miſer is ſcarce the ſhadow of one) either to wiſh or may be to contrive his death, to whom her parents thus againſt her will, have yoked her ; or elſe to ſatisfy her natural inclinations, ſhe throws herſelf into the arms of unlawful love, both of which are equally deſtructive, and which might both have been prevented, had her greedy inconſiderate parents provided her ſuch a match as had been ſuitable and proper. A ſad truth of which an inſtance follows.

There lived in Warwickſhire a gentleman of very good eſtate, who being grown ancient at the death of his firſt wife, thought

of marrying his ſon and heir, then at man's eſtate, to the daughter of a neighboring gentleman, of an ancient family and a fair eſtate, who approved of the motion, and agreed to give 5000l. with his daughter upon her marriage with the young gentleman. No ſooner had the father a ſight of the young lady, but forgetting his ſon, became a ſuitor for himſelf; and to obtain her offered as much money for her (beſides the ſettling her a good jointure on her) as her father had promiſed to give with her to his ſon. This liberal offer ſo wrought on her lady's father, that with perſuaſions, and with menaces, he forced his daughter unwillingly to conſent to be married to the old man. But as ſhe was in a manner compelled to this unequal match, ſo ſhe never lived contentedly with him: for her affections wandering after other men, ſhe gave entertainment to a young gentleman of twenty two years of age, whom ſhe liked much better than her huſband, as one more ſuitable to her young years; that ſhe grew impatient for her huſband's death therefore ſought to cut that thread of life ſhe was of opinion nature lengthened out too long: and to that end having corrupted her waiting woman, and a groom belonging to the ſtable, ſhe reſolved by their aſſiſtance, and that of her enamorato, to murder him in his bed by ſtrangling him; which reſolution (although her lover failed her, and came not at the time ſhe appointed him recoiling at the diſmal apprehenſion of a fact ſo horrid) ſhe executed only by her ſervants. For watching till her huſband was aſleep, ſhe let in thoſe aſſaſſins, and then caſting a long towel about his neck, ſhe cauſed the groom to lie upon him, that he might not ſtruggle, whilſt ſhe and her maid, by ſtraining the towel, ſtopped his breath. And now the next thing was how to prevent diſcovery, and to that end they carried him to another room, where a cloſe ſtool was placed, on which they ſet him; and when the maid and groom were both withdrawn and the coaſt clear, ſhe made ſuch a hideous outcry in the houſe, wringing her hands and pulling off her hair, and weeping ſo extremely, that none ſuſpected her; for ſhe alledged, that miſſing him ſometime out of bed, ſhe went to ſee what was the matter he ſtaid ſo long, found him dead ſitting on his cloſe ſtool; which ſeeming very plauſible, prevented all ſuſpicions of his death. And being thus rid of her huſband, ſhe ſet a greater value on her beauty, and quite ſhook off her former lover (perhaps becauſe he had implicitly refuſed to be an actor in her huſband's tragedy) and coming up to London, made the beſt market of her beauty that ſhe could. But murder is a crime that ſeldom goes unpuniſhed to the grave; in two years after, juſtice overtook her, and brought to light this horrid deed of darkneſs. The groom (one of the actors of this fatal tragedy, being retained a ſervant with the ſon and heir of the old murdered Gentleman, for whom the lady was firſt deſigned) with ſome other ſervants attending him to Coventry, his guilty conſcience (he being in his cups) forced him upon his knees to beg forgiveneſs of his maſter for the murder of his father. And taking him aſide, acquainted him with all the circumſtances of it.

The gentleman, though ſtruck with horror and amazement at the diſcovery of ſo vile a fact, yet gave the groom good words,

but ordered his ſervants to have an eye upon him, that he might not eſcape when ſober; and yet eſcape he did, for all their vigilance, and being got to the ſea ſide, he attempted three times to put to ſea, but was as often forced back by contrary winds; where being purſued and apprehended by his maſter, he was brought back a priſoner to Warwick, as was ſoon after, the lady and her gentle woman alſo, who were all juſtly executed for that horrid murder; The lady was burned on Wolveyheath and the two ſervants ſuffered death at Warwick; leaving the world a ſad example of the diſmal conſequences of doting love, forced marriages and unequal matches.

And though in many ſuch like matches, the miſchief does not run ſo high, as to break forth into adultery and murder, but the young lady from a principle of virtue and the fear of God, curbs her natural inclinations, and preſerves her chaſtity yet even in this very caſe, her huſband, conſcious of the abatement of his youthful vigor, and his own weak imbecile performance of the conjugal rites, ſuſpects his virtuous lady and watches over her with Argus' eyes, making himſelf and her unhappy by his ſenſeleſs jealouſy; and though he happens to have children by her (which may well be, having ſo good ground to improve on) yet can ſcarcely think they are his own. His very ſleep is diſturbed with the dreams of cuckoldom and hornes; nor dares he keep a pack of hounds for fear Actæon's fate ſhould follow him. Theſe are a few of the ſad effects of old men's dotage and unequal matches.

But let us turn the tables now, and ſee if it be better on the other ſide, when a young ſpark about two and twenty marries a granum of three ſcore and ten, with a face more wrinkled than a piece of tripe. This I am ſure is more unnatural: Here can be no increaſe, unleſs of gold, which oftentimes the old hag (for one can call her no better) that marries a young boy to ſatisfy her letcherous itch, conveys away before her marriage, to her own relations, and leaves the expecting coxcomb nothing but repentance for his portion. Pocket expenſes perhaps ſhe will allow him, and for thoſe ſlender wages ſhe is bound to do the baſeſt drudgery. But if he meets with money, which was the only motive of the match (her gold being the greateſt cordial at the wedding feaſt) he does profuſely ſquander it away and riots in exceſs amongſt his whores hoping, ere long, his antiquated wife will take a voyage to another world, and leave him to his liberty: whilſt the old grandame, finding her money waſted and herſelf deſpiſed, is filled with thoſe reſentments that jealouſy, envy, and neglected love can give, hoping each day, to ſee him in his grave, though ſhe has almoſt both feet in her own: thus they each day wiſh for each other's death, which, if it comes not quickly, they often help to haſten.

But theſe are ſtill excreſences of marriage, and are the errors the people marrying, and not the fault of marriage itſelf. For let that be what God at firſt ordained, a nuptial of two hearts, as well as hands, whom equal years and mutual love has firſt united, before the perſons join their hands, and ſuch will tell you that mortals can enjoy no greater happineſs on this ſide of heaven.

CHAP. III.

Directions to both Sexes, how to manage themselves in the Act of Coition, or Veneral Embraces.

HAVING shewed in the former chapter, the pleasures and advantages of marriage, I will now give some directions to the new married persons, how to manage themselves in the exercise of one of the greatest, most natural and agreeable pleasures thereof, and that is their nocturnal or veneral embraces; a pleasure peculiar to a married life, or at least it ought to be so, for it is not permitted to any besides. And let not any think it strange that we pretend to give directions to do what nature teacheth every one, since it is well known, that nature has been assisted by art in some of our most noble observations; besides, it is not the bare performing of that act that they are directed to, but the performing of it so that it may be efficacious for the production or generation of man, which our great master Aristotle designs in this last legacy to the world To which purpose, some things are to be observed previous to this act, and some things consequent upon it.

First, Things previous to it.

When married persons design to follow the propensions of nature for the production of the fair images of themselves, let every thing that looks like care and business be banished from their thoughts, for all such things are enemies to Venus; and let their animal and vital spirits be powerfully exhilerated by some brisk and generous restoratives? and let them, to invigorate their fancies, survey the lovely beauties of eath other, and bear the bright ideas of them in their minds. And some have thought it necessary, for the further heightening of their joys, for the brisk bridegroom to delineate the scene of their approaching happiness unto the amorous bride, in some such heroical rapture as this:

I will enjoy thee now my fairest; come,
And fly with me to love's elysium;
Now my enfranchis'd hand on every side
Shall o'er thy naked polish'd ivory slide
Now free as th' ambient air, I will behold
Thy braided snow and thy unbraided gold.
No curtain now though of transparent lawn,
Shall be before thy virgin treasure drawn.
Now thy rich mine, to my inquiring eye
Expos'd shall ready for my mintage lie.
My rudder, with thy bold hand like a try'd
And skilful pilot, thou shalt steer and guide
My bark into Love's channel, where it shall
Dance as the bounding waves do rise and fall.
And my tall pinnace in the Ciprian strait
Shall ride at anchor and unlade her freight.

Having by these, and other amorous arts, which love can better dictate than my pen, wound up your fancies to the highest pitch and desire,

Perform those rites which mighty Love requires,
And with each other quench your Am'rous fires.

But then, in the second place, when coition is over, some further directions are necessary; and therefore, let the bridegroom take heed how he retreats too soon out of the field of love, lest he should thereby leave an entrance too open, and cold should strike into the womb. But after he has given time for the matrix to close up, he may withdraw and leave the bride in her soft repose, which ought to be with all the calmness that the silent night, and a mind free from all disturbing care, can give, inclining her to rest on her right side and not removing, without great occasion, till she has taken her first sleep. She also ought to have a great care of sneezing, and avoid coughing, if it is possible, or any other thing that causes a too violent emotion of the body: Neither should these amorous engagements be too often reiterated, till the conception be confirmed; and even then the bridegroom should remember, that it is a market that lasts all the year and so should have a care of spending his stock too lavishly. Nor would the bride like him at all the worse for it; for women rather chuse to have a thing well done, than to have it often, and well and often too can never hold out.

CHAP. IX.

The Midwifes' Vade Mecum: Containing particular Directions for Midwives, Nurses, &c.

THOSE who take upon them the office of a midwife, ought to take care to fit themselves for that employment, with the knowledge of those things that are necessary for the faithful discharge thereof. And such persons ought to be of the middle age, neither too young nor too old, and of a good habit of body, nor subject to diseases, fears or sudden frights; nor] are the qualifications assigned for a good surgeon improper for a midwife, viz a lady's hand, a hawk's eye, and a lion's heart: to which may be added, activity of body, and convenient strength, with caution and dilligence, not subject to drowsiness, nor apt to be impatient. She ought also to be sober, affable, courteous, chaste; not covetous, nor subject to passion, but bountiful and compassionate. And, above all, she ought to be qualified as the Egyptian midwives of old, that is, to have the fear of God, which is the principal thing in every state and condition, and will furnish her, in all occasions, both with knowledge and discretion.

When the time of birth draws near, and the good woman, finds her travailing pains begin to come upon her, let her send for her midwife in time; better too soon than too late, and get those things ready which are proper upon such occasions. When the midwife comes, let her first find whether the true time of the birth be come, for want of observing this hath spoiled many a child, and endangered the life of the mother, or at least put her to twice as much pain as she needed. For unskilful midwifes not minding this, have given things to force down the child, and thereby disturbing the natural course of her labor; whereas nature works best in her own time and way. I do confess, it is somewhat difficult to know the true time of some women's labor, they being troubled with pains so long before their true labor comes in some, weeks before, the reason of which I conceive to

be the heat of the reins, and this may be known by the ſwelling of their legs: and therefore when women with child find their legs to ſwell much, they may be aſſured that their reins are too hot. For the cure whereof, let them cool the reins before the time of their labor, with oil of poppies, and oil of violets, or water lilies, by anointing the reins of their back with them: for ſuch women whoſe reins are over hot have uſually hard labor. but in this caſe, above all the remedies that I know, I prefer the decoction of plantain leaves and roots: you may make a ſtrong decoction of them in water, and then having ſtrained and clerified it with the white of an egg, boil it into a ſyrup with its equal weight in ſugar, and keep it for your uſe.

There are two ſkins that compaſs the child in the womb, the one is the amnois, and this is the inner ſkin; the other is the alantois, and this is the ſkin that holds the urine of the child during the time that it abides in the womb: both thoſe ſkins, by the violent ſtirring of the child near the time of the birth, are broken: and then the urine and ſweat of the child contained in them fall down to the neck of the womb; and this is that which midwives call the water; and this is an infallible ſign that the birth is near; ſo the child is no longer able to ſubſiſt in the womb, when thoſe ſkins are broken, than a naked man is in the cold air. Theſe waters, if the child comes preſently after them facilitate the labor, by making their paſſage ſlippery; and therefore the midwife muſt have a care that ſhe force not her water away, for nature knows better the true time of the birth than ſhe and uſually retains the water till that time.

Several Medicines to cauſe ſpeedy delivery.

A LOADSTONE held in her left hand, Take wild tanſey and bruiſe it, and apply it to the woman's noſtrils. Take date ſtones and beat them to powder, and let her take half a dram of them in white wine at a time.

Take parſley, bruiſe it and preſs out the juice, and put it up, being ſo dipped, into the mouth of the womb, and it will preſently cauſe the child to come away, though it be dead, and after burden alſo: beſides, it cleanſeth the womb, and alſo the child in the womb of all groſs humors

Let no midwife ever force away a child, unleſs ſhe be ſure it is dead. I once was where a woman was in labor, which being very hard her midwife ſent for another midwife to aſſiſt her, which midwife ſending the firſt down ſtairs, and deſigning to have the honor herſelf, forced away the body of the child, and left the head behind, of which the woman was forced afterwards to be delivered by a man midwife.

After the child is born, great care is to be taken by the midwives in cutting the child's navel ſtring, which, though by ſome is accounted but a trifle, yet it requires none of the leaſt ſkill of a midwife to do it with that prudence and judgment that it ought. And that it may be done ſo, you muſt conſider as ſoon as the child is freed from its mother, whether it be weak or ſtrong (for both the vital and natural ſpirits are communicated by the mother of the child by the navel ſtring) if the child be weak, put back gently part of the vital and natural blood in the

body of the child by its navel, for that recruits a weak child; but, if the child be ſtrong you may forbear.

As to the manner of cutting the child's navel ſtring, let the ligature or binding be very ſtrong, and be ſure do not cut it off very near the binding, leſt the binding unclooſe. You need not fear to bind the navel ſtring very hard, becauſe it is void of ſenſe and the part of the navel ſtring which you leave on, falls off in its own accord in a few days: the whole courſe of nature being now changed into the child, it having another way ordained to nouriſh it. It is no matter with what inſtrument you cut it off, if it be ſharp, and you do it cleverly. The piece of the navel ſtring that fall be ſure you keep from touching the ground: remember what I have before told you; and if you keep it by you it may be of uſe. The navel ſtring being cut off, apply a little cotton or lint to the place to keep it warm, leſt the cold enter into the body of the child, which it will be apt to do if it be not bound hard enough.

The next thing to be done, is to bring away the after birth or ſecundine, elſe it will be very dangerous for the woman. But this muſt be done by gentle means, and without any delays, for in this caſe eſpecially, delays are dangerous: and whatever I have ſet down before, as good to cauſe ſpeedy delivery, and bring away the birth, is good alſo to bring away the after birth.

And after the birth and after birth are brought away, if the woman's body be weak, keep her not too hot; for extremity of heat weakens nature and diſſolves the ſtrength; but whether ſhe be weak or ſtrong let no cold air come near her at firſt; for cold is an enemy to the ſpermatic parts. If cold get into the womb, it increaſes the after pains, cauſes ſwellings in the womb, and hurts the nerves.

If what I have written be carefully obſerved among midwives, and ſuch nurſes as keep women in their lying in, by God's bleſſing, the child bed women may do very well, and both midwife and nurſe gain credit and reputation.

For though theſe directions may in ſome things thwart the common practice, yet they are grounded upon experience, and will infallibly anſwer the end.

But there are ſeveral accidents that lying in women are ſubject unto which muſt be provided againſt, and theſe I ſhall ſpeak of next.

The firſt I ſhall mention are the after pains, about the cauſe of which authors very much differ, ſome think they are cauſed by thinneſs, ſome by the thickneſs, ſome by ſliminеſs, and ſome by the ſharpneſs of the blood; but my own opinion is it proceeds from cold and water. But whatever the cauſe may be, the obſerving of the foregoing directions will very much abate them, if not quite take them away. But in caſe they do happen, boil an egg, and pour out the yolk of it, with which mix a ſpoonful of cinnamon water, and let her drink of it; and if you mix two grains of ambergreaſe with it, it will be better.

The ſecond accident lying in women are ſubject to, is excoriations in the lower part of the womb. To help this, uſe oil of

ſweet almonds, or rather oil of St. John's wort, with which anoint the parts.

Another accident is, that ſometimes through very hard labor, and great ſtraining to bring the child into the world, the lying in woman, comes to be troubled with the hemorrhoids or piles; to cure this let her uſe polypodium bruiſed and boiled in her meats and drinks.

A fourth thing that often follows, is the retention of the menſes; this is very dangerous, and, if not remedied, proves mortal.

But for this, let her take ſuch medicines as ſtrongly provoke the terms: and ſuch are piony roots, dittany, juniper berries, betony, centaury, ſavory, pennyroyal, ſage, feverfew.

The laſt thing I ſhall mention, is the over flowing of the menſes. This happens not ſo often as the foregoing, but yet ſometimes it does, and in ſuch caſes take the ſhepherd's purſe, either boiled in a convenient liquor, or dried and beaten to powder, and you will find it very good to ſtop them.

Having thus finiſhed my Vade Mecum for midwives, before I conclude, I will add ſomething of the choice and qualifications of a good nurſe, that thoſe who have occaſion for them may know how to order themſelves for the good of their children which they nurſe.

Firſt, then, if you would chuſe a good nurſe, chuſe one of a ſanguine complexion, not only becauſe that complexion is generally accounted beſt, but alſo, becauſe all children in their minority have their complexion predominant. And that you may know ſuch a woman, take the following deſcription of her.

Her ſtature of the middle ſize, her body fleſhy, but not fat, and of a merry, pleaſant and cheerful countenance: a freſh ruddy color, and her ſkin ſo very clear, that you may ſee her veins through it. She is one that loves company, and never cares to be alone; never given to anger, but mightily to playing and ſinging; and which makes her the fitteſt part for a nurſe, ſhe very much delights in children. In chuſing ſuch a one you can hardly do amiſs; only let me give you this caution, if you can not get one exactly of this deſcription, which you will find very difficult, get one as near as you can to it. And let theſe rules further guide you in your choice 1. Let her age be between 20 and 30 for then ſhe is in her prime. 2. Let her be in health, for ſickneſs infects her milk, and her milk the child. 3. Let her be a prudent woman, for ſuch a one will be careful of the child. 4. Let her not be too poor, for, if ſhe wants, the child muſt want too. 5. Let her be well bred, for ill bred nurſes corrupt good nature. 6. If it be a boy that is to be nurſed be ſuch an one whoſe laſt child was a boy, and ſo it will be the more agreeable, but if it be a girl, let the nurſe be one whoſe laſt child was a girl. 7. If the nurſe has a huſband, ſee that he be a good likely man, and not given to debauchery, for that may have an influence upon the child. 8 In the laſt place, let the nurſe take care ſhe be not with child herſelf; for if ſo, ſhe muſt of neceſſity either ſpoil her own child or yours, or perhaps both. To a nurſe thus qualified, you may put your child without danger.

And let ſuch a nurſe obſerve the following directions, for the better governing and ordering herſelf in that ſtation.

Directions for Nurſes.

1. LET her uſe her body to exerciſe; if ſhe hath nothing elſe to do, let her exerciſe herſelf by dancing the child; for moderate exerciſe cauſeth good digeſtion; and I am ſure good blood muſt needs make good milk, and good milk cannot fail of making a thriving child. 2. Let her live in good air; there is no one thing more material than this. The want of this makes ſo many children die in London; and even theſe few, that live, are none of the wiſeſt; for groſs and thick air makes unwieldy bodies, and dull wit: and let none wonder at this, for the operation of the air to the body of man is as great as meat and drink, for it helps to engender the vital and animal ſpirits; and this is the cauſe of ſickneſs and health, of life and death. 3. Let her be careful of her diet, and avoid all ſalt meats, garlic, leeks, onions, and muſtard, exceſſive drinking of wine, ſtrong beer or ale, for they trouble the child's body, with choler: cheeſe, both new and old, afflicts it with melancholy, and all filth with phlegm. Let her never deny herſelf ſleep when ſhe is ſleepy, for by that means ſhe will be more wakeful when the child cries. Let her avoid all diſquiets of mind, anger, vexation, ſorrow and grief, for theſe things very much diſorder a woman, and therefore muſt be hurtful to the milk.—If the nurſe's milk happens to be corrupted by any accident, as ſometimes it may be, by being either too hot or too cold, in ſuch caſes let her diet be good, and let her obſerve the cautions already given her. If her milk be too hot, let her cool it with endive, ſuccory, lettuce, ſorrel, purſlain, and plaintain; if it be too cold, let her uſe beverage, vervain, bugloſs, mother of thyme, and cinnamon; and let her obſerve this general rule, whatſoever ſtrengthens the child in the womb, the ſame attends the milk.—If the nurſe wants milk, the thriſtle commonly called our lady thriſtle is excellent for her breeding of milk; there being few things growing (if any) that breed more and better milk than that doth; alſo, the hoof of the fore feet of a cow, dried and beaten to powder, and a dram of the powder, taken every morning in any convenient liquor, increaſes the milk.

Remedies for increaſing Milk.

IF A nurſe be given to much fretting, makes her lean and hinders digeſtion, and ſhe can never have ſtore of milk, nor what ſhe has be good. Bad meats and drink, alſo hinder the increaſe of milk, and therefore ought to be foreborn: and therefore women that would increaſe their milk, ſhould eat good meat (that is if they can get it) and let her drink milk wherein fennel ſeed hath been ſteeped. Let her drink barley water, burrage and ſpinnage; alſo, goat's milk, cow's milk, and lamb ſodden with verjuice; let her alſo comfort the ſtomach with confection of annis ſeed, caraway and cummin ſeeds, and alſo uſe thoſe ſeeds ſodden in water; alſo take barley water, and boil therein green fennel and dill, and ſweeten it with ſugar, and drink it at your pleaſure.

Hot fomentations open the breasts and attack the blood, as the decoction of fennel, smallage, or stamp mint applied. Or,

Take fennel and parsley green, each a handful, boil and stamp them, and barley meal half an ounce, with seed a dram, storax, calamint two drams, oil of lilies two ounces, and make a poultice.

Lastly, take half an ounce of deer's suet and as much parsley roots, with the herbs, an ounce and a half of barley meal, three drams of red storax, three ounces of oil of sweet almonds; boil the root and herbs well, and beat them to a pap, and then mingle the other amongst them, and put it warm to the nipples, and it will increase the milk.

And thus courteous Reader, I have at length finished what I designed and promised, and can truly affirm, that thou hast here those Receipts, Remedies and Directions given unto thee, with respect to Child Bearing Women, Midwives, and Nurses, that they are worth their weight in gold, and will assuredly with the blessing of God, answer the end, whenever thou hast occasion to make use of them, they being things taken on trust from tradition or hearsay, but the result and dictates of sound reason and long experience.

FINIS.